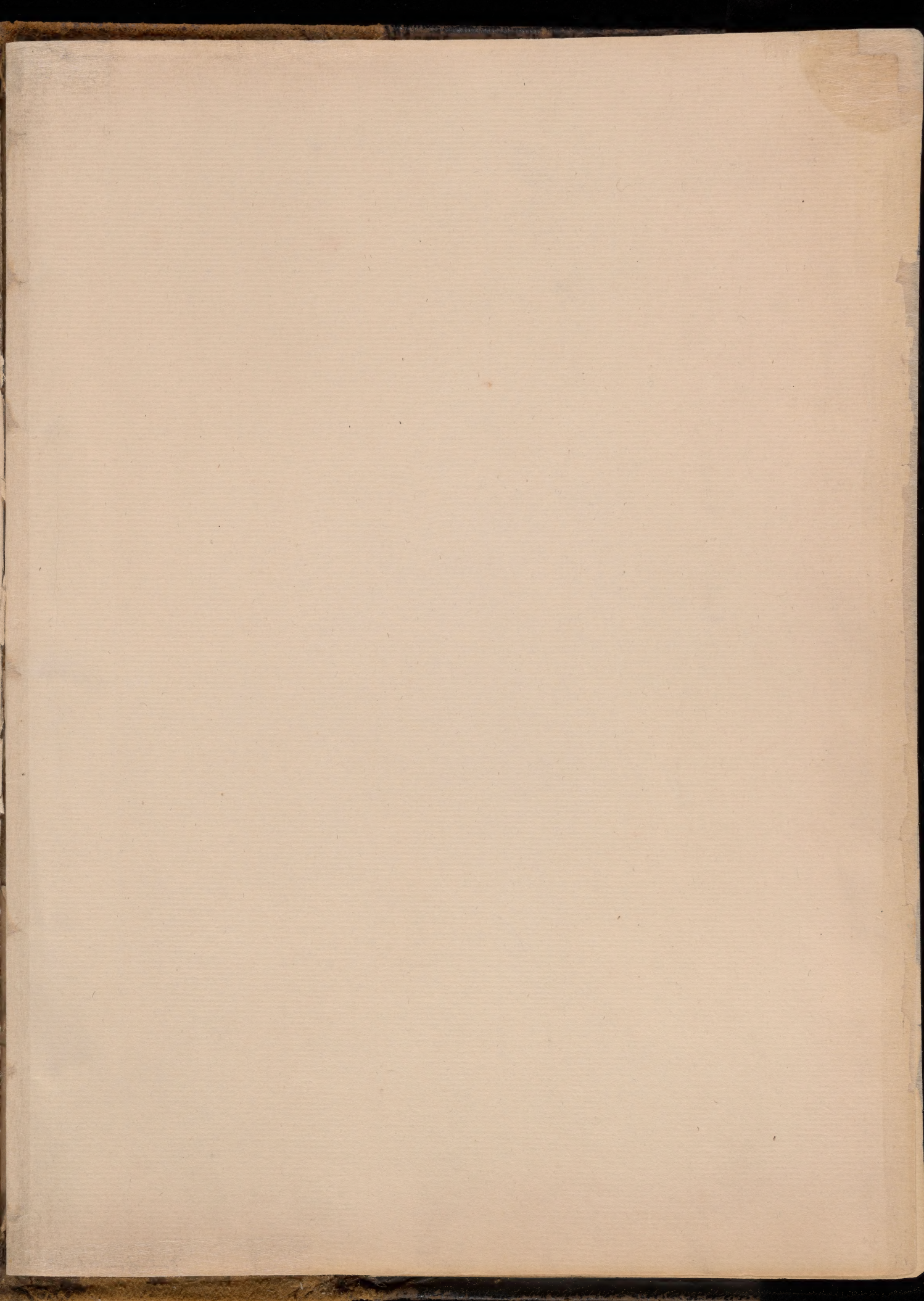
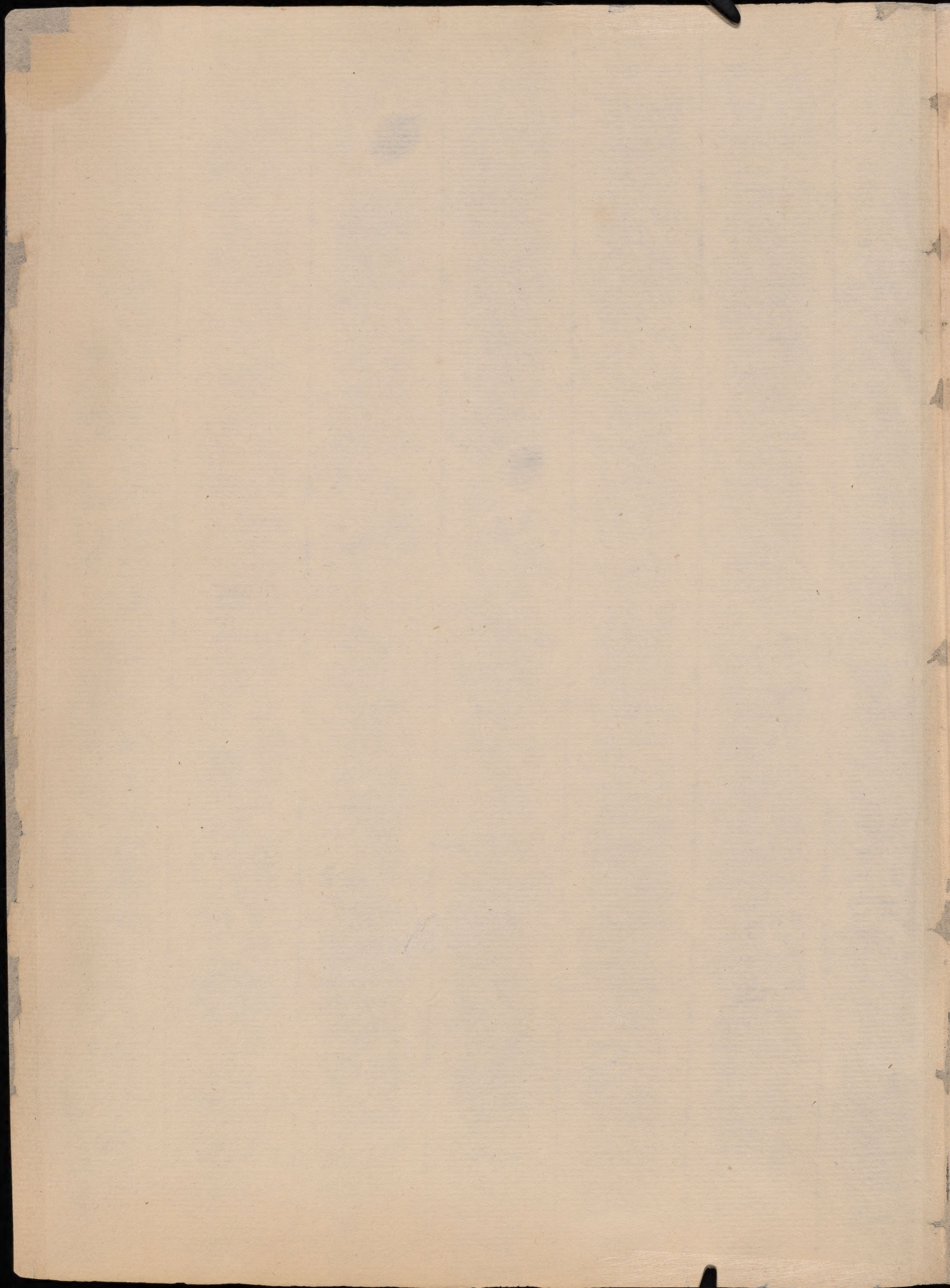
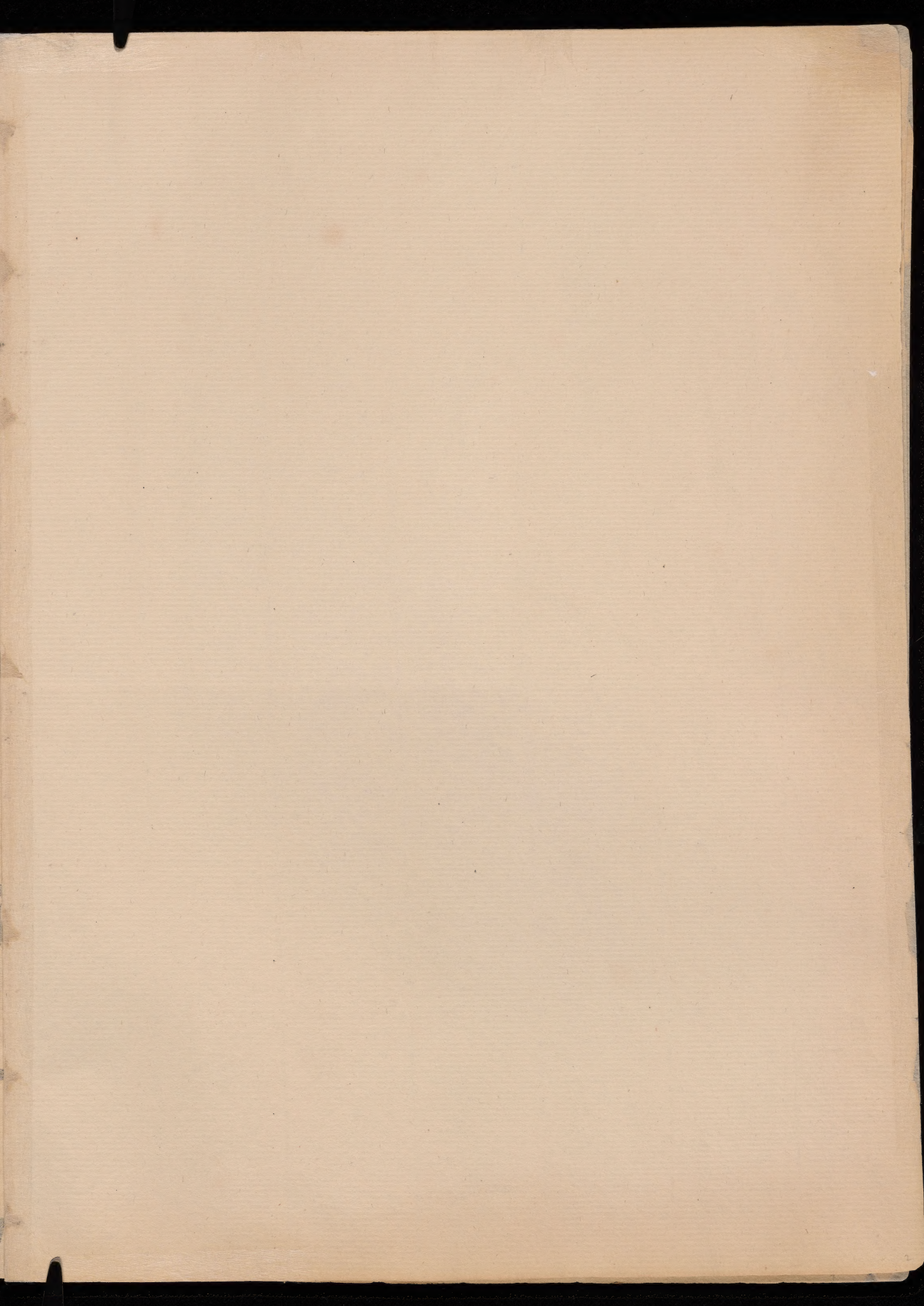
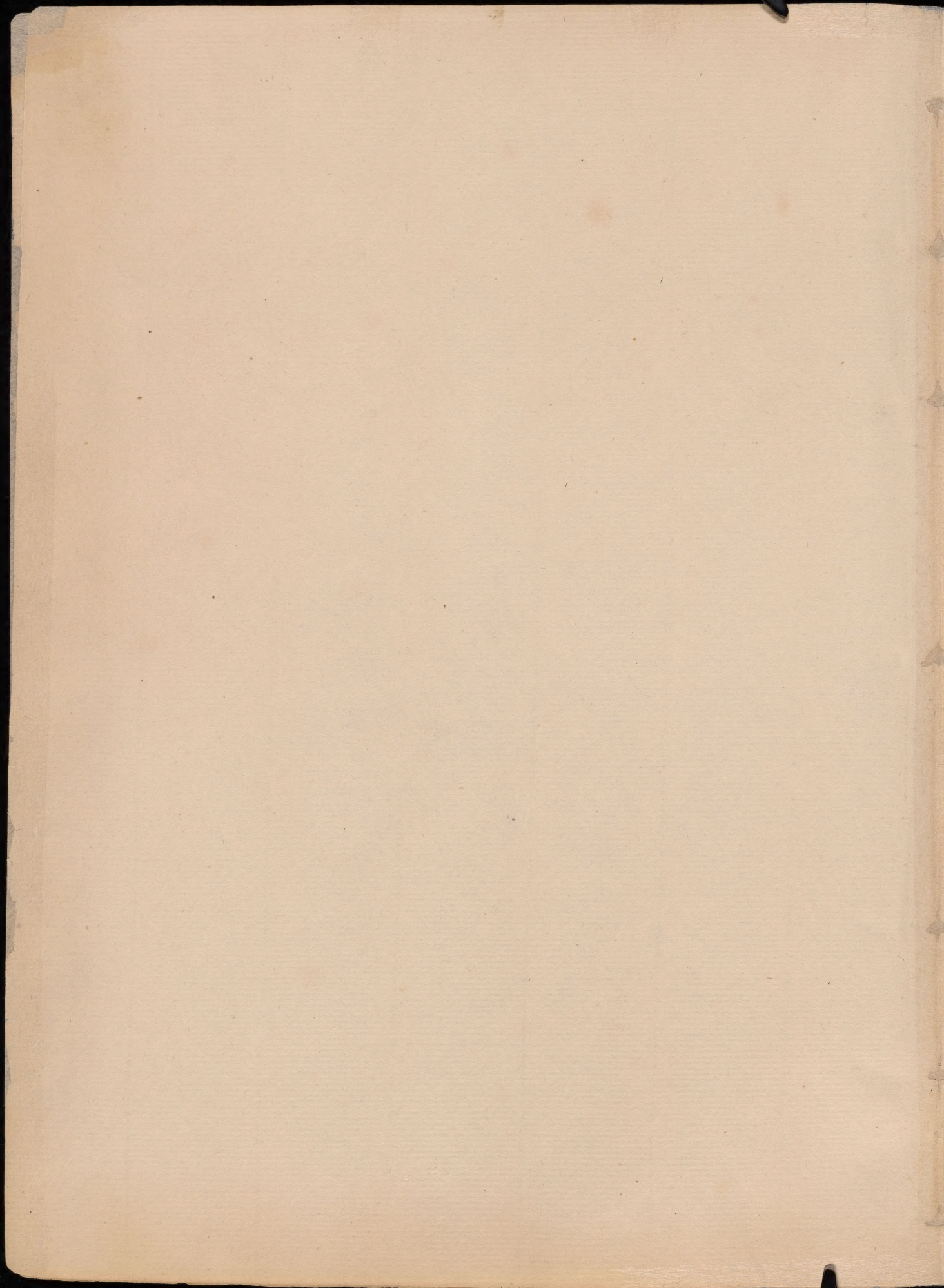


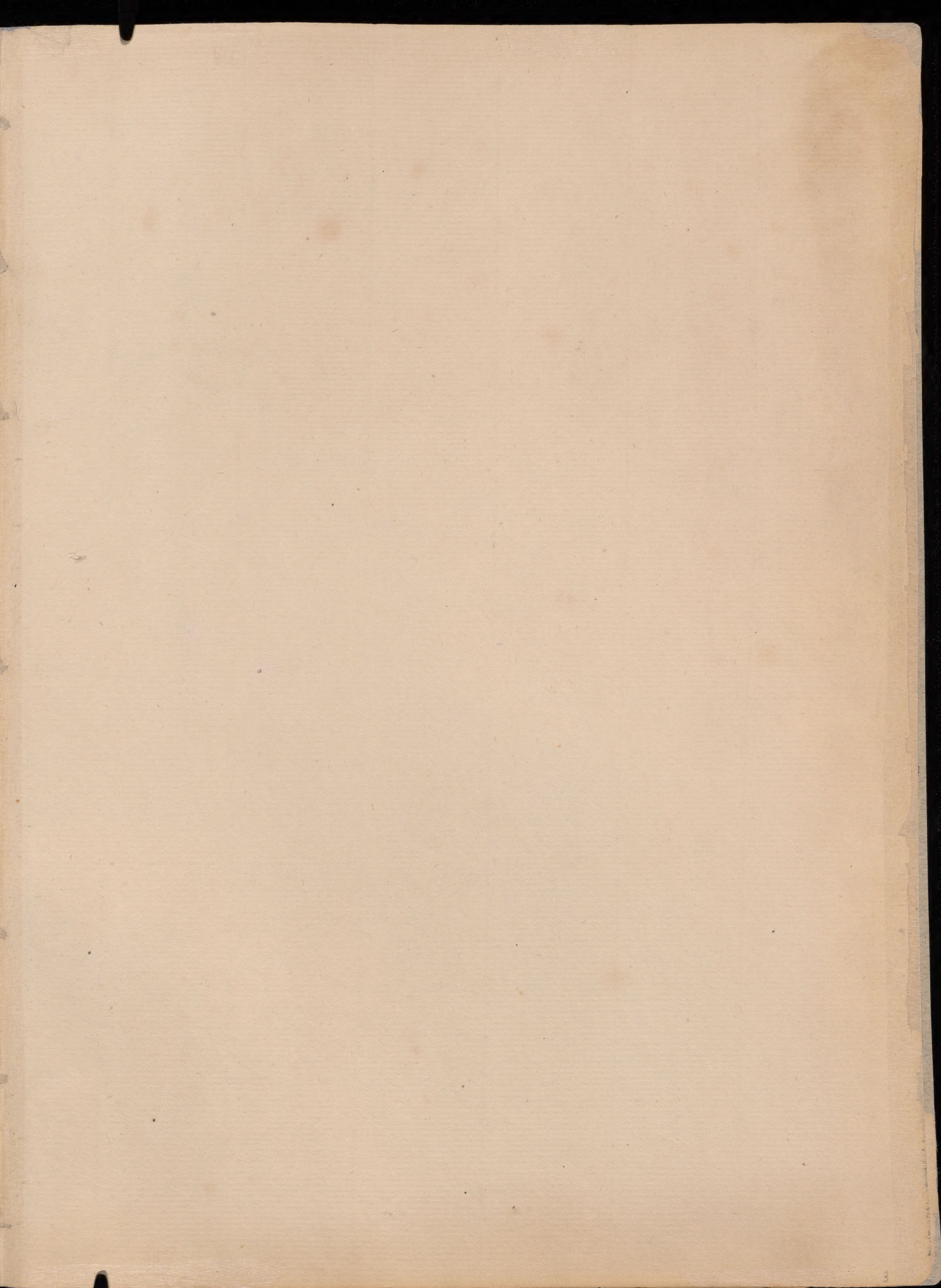
- | | |
|------|---------------|
| No 1 | J. Devereux |
| 2 | S. Lambert |
| 3 | N. Bauditch |
| 4 | D. L. Puckman |
| 5 | S. L. Puckman |
| 6 | G. Ropes |
| 7 | G. Burchmore |
| 8 | J. Briggs |
| 9 | G. Nichols |
| 10 | L. Dana |

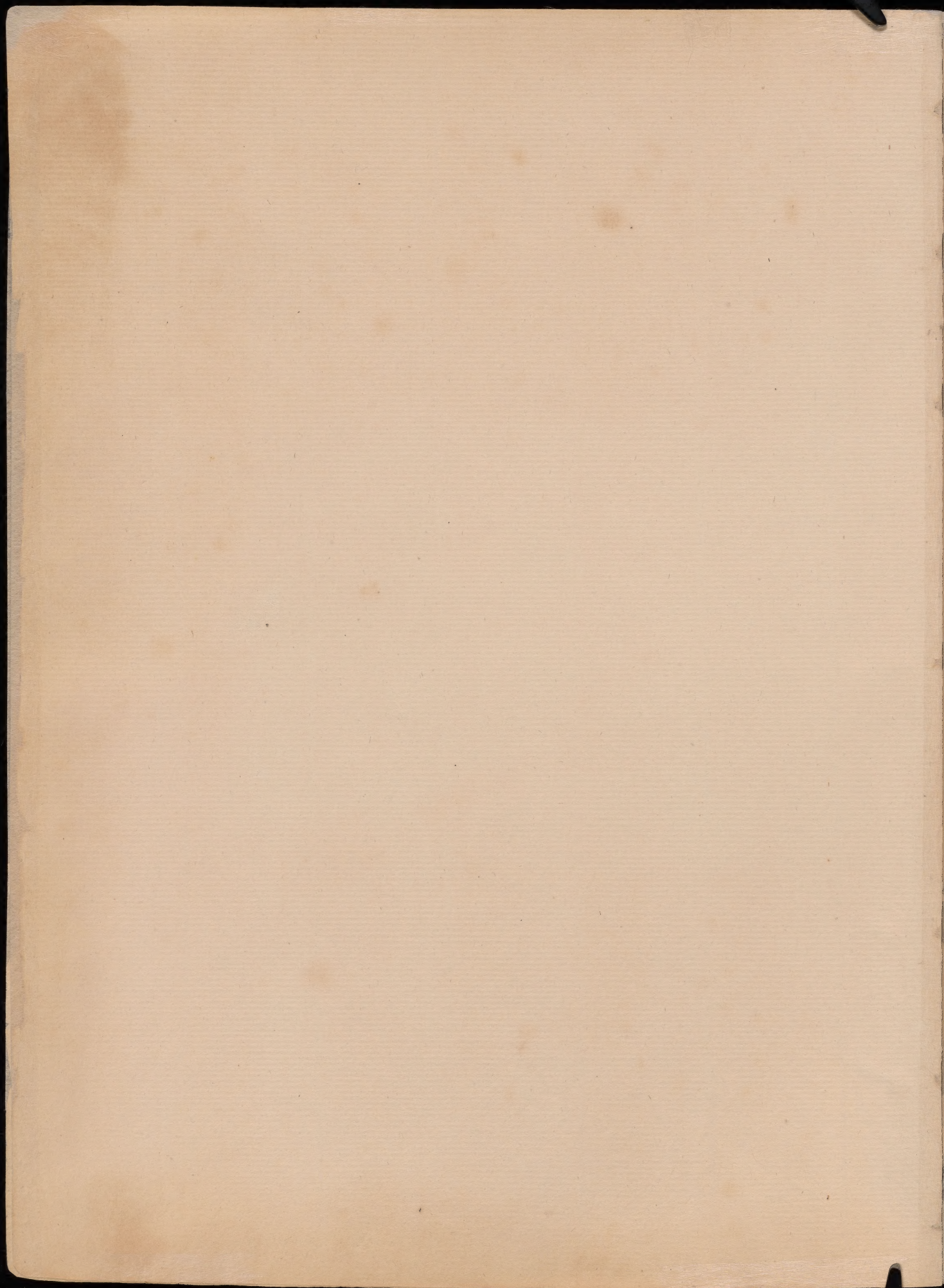


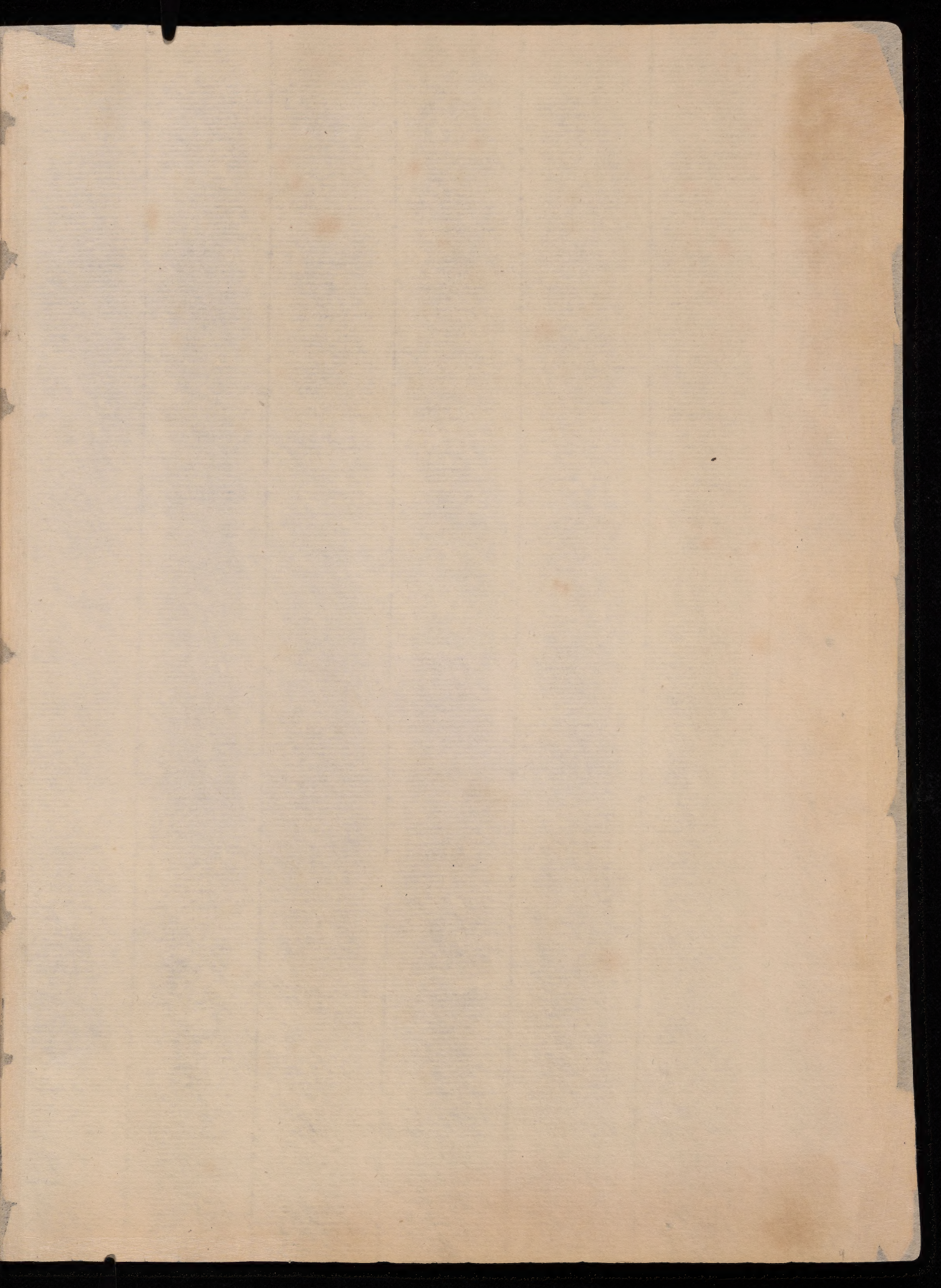


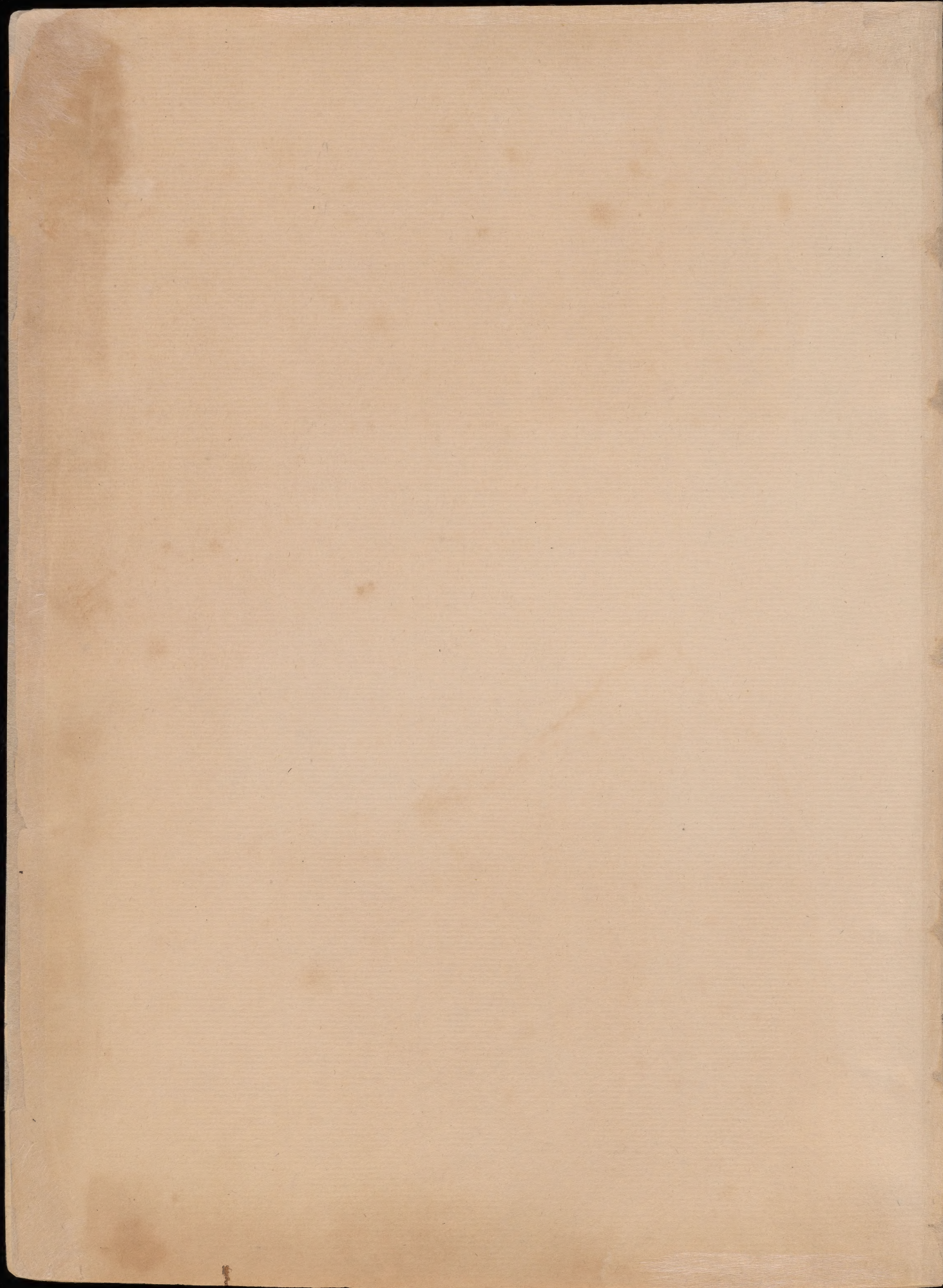


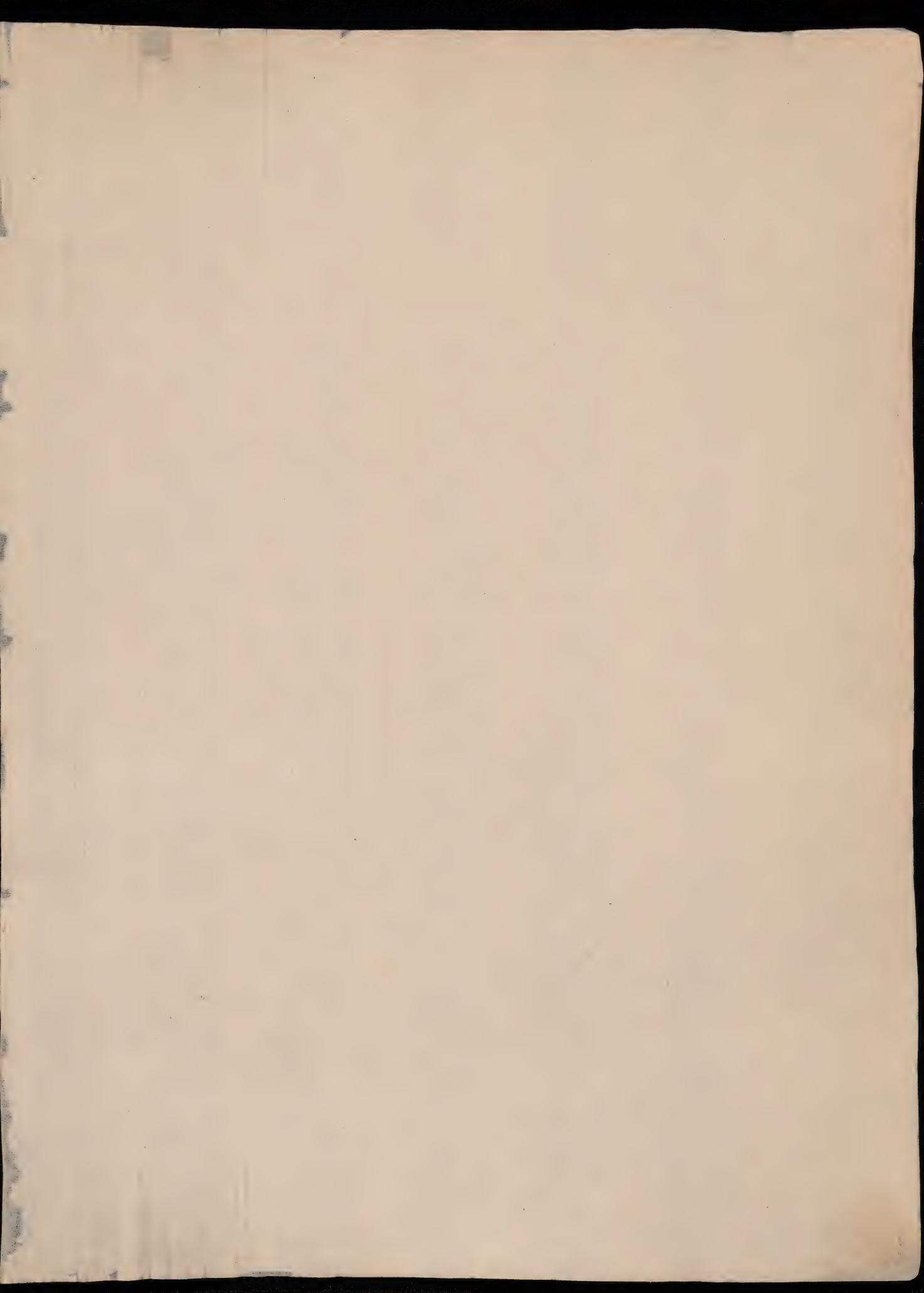


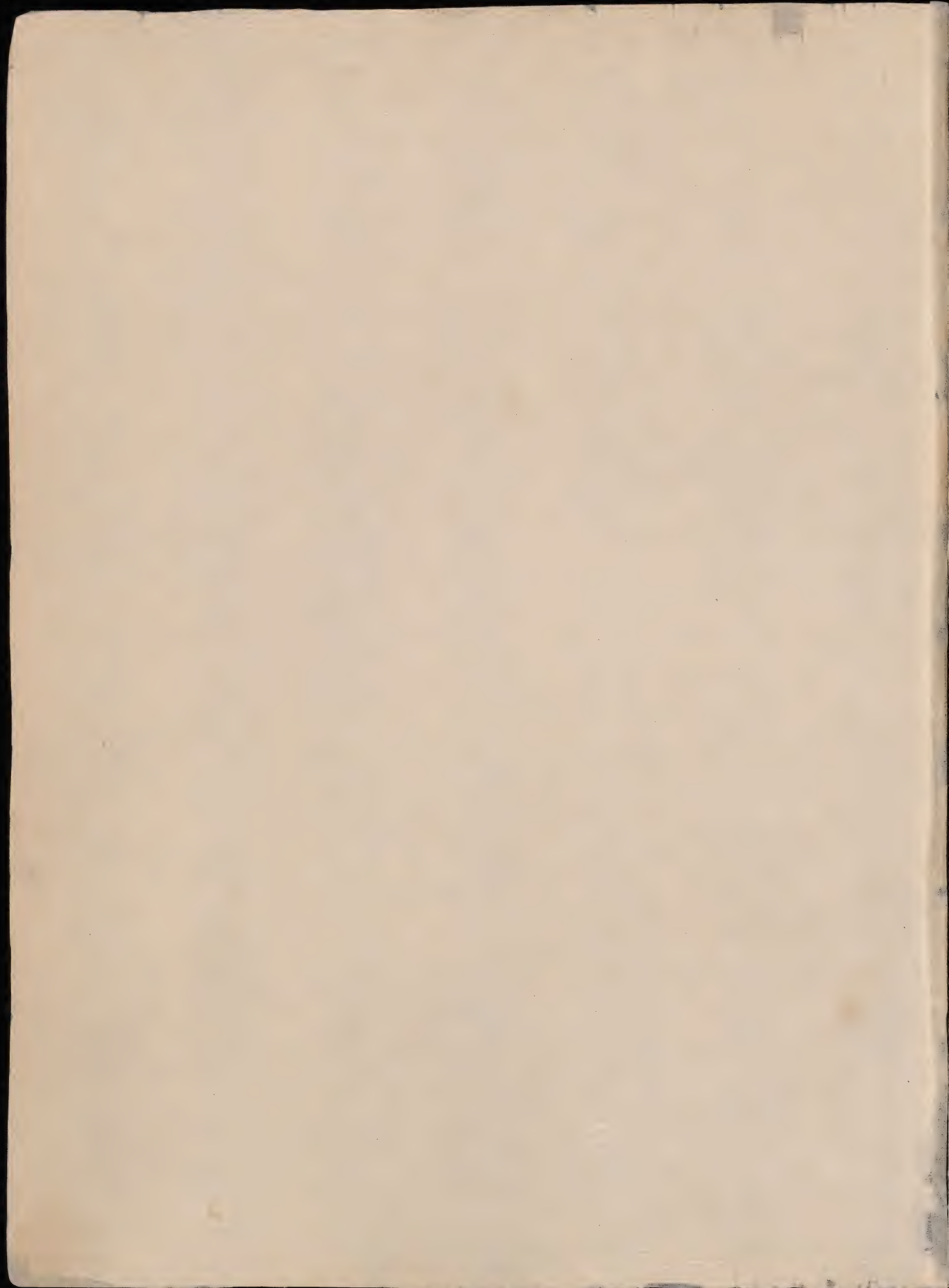












James Devereaux's Journal in the Ship Franklin from
Salem to Batavia, & Japan and Back. —

Proceed from Boston towards Batavia; in the passage came in sight of the Island St. Anthony (Page 7). Observe the Lat. of the Island of St. Paul 37° 52' S. (Page 21) the Error of Moore in the Lat. of this place being 21 miles, the longitude of the Island was observed 77° 42' E. after the Straits of Sunda. find a current setting Westerly 2 knots per hour, 16 hours out of 24.

Set sail from Batavia towards Japan; Remarks on a bank at the Entrance of the Straits of Banca, wrongly marked on the Chart. Important remarks on the Passage E. of the Seven Islands, not noted in the Directory. (page 27 & 65). Remarks on the latitudes of the Islands near Pulo Pisang (in Pages 27 & 65). See Pulo Condore (page 29). Piscadore Isl^s (page 31). Coast of China (Page 31). At Japan (page 31) Observations on the Soundings & Currents throughout this passage. Depart from Japan to Batavia: Observe the Latitude of the Island of Nagasack 25° 39' N. (Pages 33 & 67). being situated 40 miles North of its place on the Charts. — See Pulo Condore & adjacent Islands pages 33 & 67. Remarks on Pulo Aore &c. (pages 35 & 67). Enter the Straights of Yospar arrive at Batavia, in 23 from Japan. In all this passage, are given various remarks on the Soundings & Currents, Set sail from Batavia for Boston, observe the Stream Rocks in the Straits of Sunda (Page 39 & 68) & Soundings on Cape Lagullas (Page 49). Arrive at Boston (Page 61).

Directions for Sailing from Batavia to Japan, given by the Dutch East India Company to Capt Devereaux, for his Government. (Page 69) Instructions respecting the formalities to be used at Japan 72
Weights & Coins at Japan ————— 73 —

Samuel Lambert's Journal in the Ship Adventure, from
Salem to Copenhagen, Calcutta & Back. —

Take a departure from Cape Ann (Page 77). Make the Orkney Isl^s (Page 83) Fair Island, Coast of Norway. Isl. Jutland Coast of Sweden; Arrive at Copenhagen (Page 83). Set sail from Copenhagen, come to Anchor at Elsinore: Depart from that place, make Aholt & Scaw Lights, (Page 85) Make Fair Island (Page 87). Come in sight of the Cape de Vard, viz St. Nicholas, St. Jago & Fig. (Page 91) Several Remarks in the Currents, & some magnetical observations in this tract, near Tristan d'Acunha. Speak with Capt Domison from Rhode Island (Page 98). Try for Soundings on the bank of Cape Lagullas, find no bottom with 120 fathoms. Make the land of Lagernot, Soundings along the Coast, observations of the variation, currents &c. (Page 111) Arrive at Calcutta (Page 111 & Note 2nd Page 143). Set sail from Calcutta (Page 113), observe the variation in several Places towards the Equator, Speak with 3 Indians in Long. 85° E (Page 117). meet with a very strong Northerly Current in the Lat. 28° S. Long. 40° E. (Page 125). Make Cape Lagullas but do not experience a Westerly Current in this tract (Page 127 & note 4 Page 144). Try for Soundings on the Eastern part of the bank of Cape Lagullas. Make St. Helena (Page 131). Get Soundings on Georges Bank (137). Make Cape Ann (Page 139) Many remarks on Currents, variation &c during this passage. —

Nathl. Bowditch's Journal in the Ship Astrea. from Salem to Lisbon, Madeira, Manilla & Back. —

Proceed from Salem to Lisbon, remarks in the Latitude of the fort of Cas-
-age and Cape St. Roque. (Page 169). Set Sail for Madeira, observe the Vari-
-ation of the Compass near Lisbon & Madeira, & on several places on the passage.
In proceeding from Madeira to India, see the Isl^d of Palma (Page 173). ~~the Island~~
the Island of Trinidad (Page 179). Enter the Straits of Sunda (Page 191) pro-
-ceed from thence through the Straits of Banca (193) pass in sight of Pulo
Condore (195) Pulo Saputo (195) & arrive at Manilla. Soundings. Variations
observed in that tract.

Take our departure from Goat Island (199). pass in sight of Pulo Condore (199)
pass the Straits of Banca & Sunda (201) get Soundings on Cape Lagunas (213) ex-
-perience a Strong Current, setting to the westward 11 in the Passage from
the Cape of Good Hope to Salem,

Remarks at Lisbon _____ page _____ 229 to 230
D^o _____ Madeira _____ D^o _____ 231. —

Memor in the latitude & longitude of the Island of Trin^d } 232. 233
error of 2° in the longitude of that Island, given by Moore

Latitude & Longitude of the Islands of Martin & near Trinidad — 233.

Harbour Journal at Manilla _____ 234 &c

Coins Weights & Measures at Manilla _____ 236

Numeral Characters used by the Chinese _____ 239 to 240

Magnetical Observations taken on board the Ship Henry
in her passages to & from the Island of France _____ 241. 242

Soundings on Brown's bank _____ 243.

Latitudes & Longitudes of several places in the Island of Bau-
-mor, Straits of Sunda, Banca, Chinese Sea, Straits of
Macassar, & Mendoro, Alicant in Spain, & Cape Anne lights — 243 to 245

Dudley L. Pickman's Journal in the Belisarius. from Salem to Teneriffe & back, from thence to Tranquebar & Back. —

Proceed from Salem towards Teneriffe, Make Madeira (251) Palma (251) come to Anchor at Teneriffe (251).

Got underway at Oratava (253) & Proceed for Salem; Get Soundings in Lat 43.3 & Long. 65 W. (254) Arrive at Salem (259) Usual remarks on weather, winds &c. in both passages.

Set out again from Salem to East Indies (261) Make Ceylon (269) Coast of Coromandel (281) & Seven Pagodas (281) Come too at Madras off Fort George (281) Customs at arrival at Madras (281.)

Proceed from Madras to Tranquebar (283) Make Seven Pagodas and Pondichery (283) Come to Anchor at Tranquebar (283) Customs in that Place (283) Remarks on the Currents in the Passages,

Get under way at Tranquebar for Salem (285). See Nagore Pagodas & Ceylon (285). See Breakers (291). In 28 S. 44 E. Make land of Africa (291). Find Current setting strong to the Southward & Westward, make Cape Lagullas (293) Make St. Helena (295). Remarks with the Thermometers on the comparative temperature of the Air & Water (303) See South Shoal of Nantuxet. various Soundings (303) make Thatcher's Isl^d &c and arrive at Salem 303. *arr*

No 5

Dudley Pickman's Journal. in the Ship Anna. from Boston to Sumatra & Back. In

Set sail Jan. 9th 1801 from Boston bound to Sumatra (305). Make Fayal & Pico (309) Fried Goul & leg (309). Strong southerly current in Latth 34 N Long. 29 W. (301) Make Ile Sal, Mayo, & St. Jago (313) Magnetic Observations. Strong S. Current Lat. 37 S. Long. 16 E. (321). Spoke the Ship Nottingham (323) who thought they had seen the Telemague Shoal (see Note page) (364).

Make Engano, Sumatra, Sugar Loaf Hill (in S), Rat Island, Buffalo Point &c. (331) Remarks on Bencoolen road (331) Come too at Bencoolen May 25th 1801 (331). May 26. Set sail from Bencoolen towards Kattal (333.) Soundings. make N. Pogy Is^l, Para or Good Fortune Is^l; remarks on its Latitude (333) Palo Loojos. Nicos Is^l. Oijong Mapang, Palo Batas or Batang, Palo Lamong Lat. 0 24 N. its Latitude wrongly marked in the Charts (333). Narrator joined (333), Come too at Kattal, The Flag Staff ^{at that place} being in the Lat. of 36 N (333.)

Jun 2nd 1801

June 8th Set sail from Kattal to Tappanooly (335) Make Paluckgas Palo Batas, Oijong Caracca, Palo Lamong (335) experience a strong southerly current. June 13th Could not fetch Kattal. bore away for Palo Lamong & came too (335) ~~June 16th Fine land breeze~~ having lost 4 or 5 leagues in 5 days beating; went ashore at Palo Lamong, natives friendly, purchased Fowls &c. procured Oysters, from Oyster Rock (335) June 16. Fine land breeze, got under way & 17th Anchored in Tappanooly (335 N) (335). various remarks.

July 10th Set out from Tappanooly for Kattal & Padung (337). Make Palo Ely, Telady Is^l Oijong Caracca, Anchor at Kattal (337).

July 11. Proceed from Kattal (337) Struck a Shoal of Coral Rock, make Palo Lamong, Palo Salvo, & Part of Palo Batas, saw Breakers (337) not laid down in the Charts. Make Mount Ophi, Licvi Is^l; charts very unsatisfactory, Make Padung, Palo Pisung in 54 S Lat, came too there. Many useful remarks on the currents &c.

July 22nd 1801 Set out from Padung for Boston (339) take departure from Mount Poosang, experience a strong S. Current in the Rosembique & round the Cape (345. 347) Make Cape Laquittas & get Soundings (347). Make Gunner's Quoin, Table Hill. (347) Soundings Make Ascension (351) Southerly current 10 N. 32 W. (355). Make Antirchet (347) Soundings. Make Tom Nevers Head &c. arrive at Boston. (36) Magnetic Observations & throughout the passage.

Result of Trials of Goulas Patent Logs, proved to be gross Impositions (363). Very useful Instructions & Directions for the West Coast of Sumatra (364) p

George Ropes' journal. in the Brig Tukey. from Salem to Africa & Back via West Indies. —

March 29th 1801. Set out from Salem for Senegal (375) Make Port of Senegall (379) Water discovered on a bank marked on the Charts (381) Make the land about Senegal & come too there, remarks on the Anchorage at that place (381) (387) Remarks on Cape Verd (382). On Passage from Goree to the River Gambier.

Passage from Goree to the Cape De Verd (383) Experience a Southwily current (383). Take a departure from Cape Verd. Make Bonavista (383). 1st Day (383). Remarks on the Lat. of Bonavista (Note 2 Page 389). Error in some Books in the Lat. of 1st Days (Note 3 Page 390) Make Dominico (385) Appearances of the land of St Bartholomew's 1st Eustatia (391) Remarks on Baptiste in Guadeloupe (391)

George Burchmore's Journal in the Ship Belisarius Saml. Kerry Master. from Salem to Sumatra & Back. —

Set sail from Salem Aug. 30th 1801. (Page 395) experience a Northerly Current in Lat of N Long. 23 W & a Southerly Current in 16 S. 30 W. (503) make the Islands of Tristan d'Aunha (405). Make Pulo Nagas Morelet & come to Anchor in Tappanooty (415). Set sail from Tappanooty. see breakers (415) make Hog Island, Baniack & Coco Islands. (417) Observe in the latitude of 3.1 N when the Coors bore E. N. E. 2 or 3 miles distant. & the N.W. part of Hog Island E. S. 5 leagues distant; so that the Coors bear West Northerly from Hog Island, instead of N. E. as in most of the late English Charts. Anchored at Muchie (417). Set sail from Muchie pass to the Northw^d of Hog Is^d (417) experience a Northerly Current in Lat. 2 N. Long 93 E (419) make Rodrigue. & the Isle of France (423). Come to anchor below the Group. of Port NW. (425). Set sail from the Isle of France (425) make the land off Cape de Gallas & get Sound 76 fathoms experience a fresh gale. & a westerly Current (427) Get Soundings on the coast (437) make Cape Cod, Cape Ann. & come to Anchor in Salem July 12th 1802 (439) No Magnetic Observations in this Journal.

Directions for the West Coast of Sumatra by — Weather of the Ship Louis a of Calcutta. (441). Remarks on Sailing down the Coast of Sumatra by George Burchmore. Lat. of Muchie 3. 28 N (446. .) Latitude of the South-east part of Nagas 0. 35 N erroneously laid down on the Charts (447) remarks on the Passage between the Coors & Hog Island (446. .).

N^o 8

Jeremiah Briggs's Journal in the Ship America from Salem to Sumatra & Back.

Take a departure from Cape Ann, Lights (447) make the Islands of Tristan's Acunha (455). make Pals Nizas. Experience a strong southerly current (467) make Hog Island & the Cocos & Cape Felix, come to anchor in Muckie (469).

Set sail from Muckie, pass to the Northward of Hog Island (471) Make the land to the East of the Cape Lagarias, experience a strong southerly current (479) make Cape Lagarias & get Soundings several times, make Table Mount (481) make S^t Helena (483) Make the Land of Steversink (491) Remarks on the land &c on the Coast of Sumatra, Latitude of a Shoal 3° 33' N bearing N. E. from Muckie 3 leagues dist. (495) Observed in the Latitude of 3° 1' N when the North part of Hog Island bore W. S distant 7 or 8 leagues.

N^o 9

George Nichols's Journal in the Ship Active from Salem to East Indies via England.

Take a departure from Cape Ann (499) Soundings on the bank of Newfoundland (499). Soundings in the Irish Channel (501). make Cape Clear & other places & arrive at Liverpool (503) Proceed from Liverpool up the Channel to London (505). Proceed from London, take a departure from the Land End (507). make Madras, anchor in Funchal (511).

Set sail from Funchal, make Palma & Ferro (511) take many magnetic Observations in the passage to India. Make the Island of S^t Paul (523). Make Adair's Peak (529) come to anchor in Colombo (529). Set sail from Colombo for Pondicherry & Madras (529). Various remarks on the currents in these passages.

Set sail from Madras for America (531) get Soundings on Sagal-las bank (539) experience a strong southerly current there (539). get Soundings at the Entrance of the South Channel, make Cape Cod & Cape Ann, & arrive at Salem (551.)

Interesting remarks upon the Voyage (554) & description of Funchal. (555) on the Island of S^t Paul (557) on Colombo, Pondicherry & Madras (560)

Barometrical weights & measures at Colombo and Madras (567).

Luther Dana, in the Ship Recovery from Salem to
Mocha & Back.

Set Sail from Salem, get soundings in 6 fathoms on St. George's Bank (571) make Bonavista (575) remarks on the Satons Rock (575) Take a new departure from Mayo (575) make Trinidad (579) Cape Sagulias (573) get various soundings on Sagulias bank (583) Observe the Water discovered in the Meridian of the Telemague Shoal (583) Experience a strong current from 14 to 2 S. & 7 E. (589) Make the Island of Socotra & come to anchor in Mocha (593) Set Sail from Mocha (595) make Cape St. Peter & Cape Guadalupe (595) get soundings on Sagulias bank (605) make Cape Sagulias (605) get soundings on George's Bank (615) arrive at Salem (615) various remarks on the currents in these passages.

Remarks on Socotra, Island Two Brothers, Cape Guadalupe (617) Cape Felix Cape Anthony (618) Observed Cape Bablemandel bearing W.N.W. 8 or 9 leagues distant when in the Latitude of 12° 28' N. (618) courses sailed in going from that Cape to Mocha (618) Appearance of Cape Bablemandel as you come from the W. (620) Directions for passing the Straits of Bablemandel, & going from thence to Mocha (621) Remarks on the Island of Abdalcurin & a Shoal near it (622) Observed in 12° 43' N when N.E. part Socotra bore S. & W. distant 5 leagues. S ~

The preceding table of contents was drawn up by Nathl. Bowditch, Inspector of the journals for the year 1804.

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Presented to the Society January 6. 1812.

(No. 3)

Journal

From *Salem* to *Lisbon, Madeira, Manilla and back.*
in the *Ship Ashbee, Henry Prince* Master :
kept by *Nathaniel Bowditch* for the use of the
EAST INDIA MARINE SOCIETY.

AT a Meeting of the **EAST INDIA MARINE SOCIETY**, at their Hall, on Wednesday evening, November 4, 1801, it was unanimously voted, That, in order to promote one great object of their institution, which was the acquiring of nautical knowledge, a Committee should be chosen to procure *BLANK JOURNALS* for the use of the Society; and that each Member bound to sea should be furnished with one of them, to be returned at the end of his voyage, with a regular diary of the winds, weather, and remarkable occurrences, during his voyage, arranged in such manner as the Committee should direct.

Conformable to the above vote, a Committee was chosen; who, having procured *JOURNALS* of the present form, request the Members to fill up the blanks according to the following

D I R E C T I O N S.

THE blank at the top is to be filled up with the names of the Master, and of the person keeping the Journal, the name of the ship, and the places nearest to the ship on the days given in that page. As for example: after passing the Cape de Verds, say, from the Cape de Verds towards the Cape of Good Hope.

In the 1st column of the Journal must be marked the day of the month; in the 2d, the course made good on that day; in the 3d, the distance sailed; in the 4th, the latitude at noon by account; in the 5th, the latitude by observation; in the 6th, the longitude by account; in the 7th, the longitude by observation reduced to noon by means of the log, or a time-keeper.

When the variation is observed, it is to be marked in the 10th column, the latitude and longitude in at the time of taking the observation being calculated from the observed latitude and longitude at noon by means of the log, and marked in the 8th and 9th columns. When the variation is observed both in the evening and morning of the same sea-day, the evening observation must be marked first; and it may be also noted whether the observation was by an azimuth or amplitude, by marking the former *az.* and the latter *am.*

The winds are to be marked in the 11th column, two or three times each day, placing them regularly beneath each other.

In the right hand column must be noted, the general state of the weather, winds, currents, bearings of capes, islands, &c. with their estimated distances, and any other remarks that may be useful to navigators.

When an opportunity offers to take any observations for determining the latitude or longitude of any remarkable place or point of land, it should be carefully attended to; and, for the satisfaction of those who may examine the Journals, it will be proper to give a detail of the observations. Thus, if the observation was taken for determining the latitude by the meridian altitude of the Sun, it would be proper to note the altitude of the Sun's lower limb, taken from the quadrant, his declination, and the bearing and distance of the place at the time of observation. Should the place not be in sight at the time of taking the meridian observation, it would be proper to note the course and distance made good by the ship, between the times of taking the meridian observation and observing the bearing of the land. A particular attention to observations of this kind will probably be the means of procuring a valuable collection of useful information. If the latitude or longitude observed should differ from any late books or charts, it would be proper to note it. In case any general remarks on the wind, weather, &c. experienced in the passages, should occur to the Journalist, he is requested to arrange them in the pages allotted for that purpose at the end of the Journal. A blank page is also assigned for an account of the coin, weights and measures of the several places touched at in the voyage; and it is hoped that care will be taken in acquiring information on these subjects. Any remarks on the commerce of the different places touched at in the voyage, with the imports, exports, and manner of transacting business, will be of public utility. Whatever is singular in the manners, customs, dress, ornaments, &c. of any people, is deserving of notice.

There should be collected, for the Museum, specimens of various kinds of vegetable substances, earths, minerals, ores, metals, volcanic substances, &c. There should also be preserved such parts of birds, insects, fish, &c. as serve most easily to distinguish them, and if no part can be preserved, a description of any that are remarkable may be given. Inquiry should be made for any remarkable books in use, among any of the eastern nations, with their subjects, dates and titles. Articles of the dress and ornaments of any nation, with the images and objects of religious devotion, should be procured.

Nathaniel Bowditch's Journal, in the Ship Astrea

| Date. 1796 | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|---------------|-----------|-------|-----------|-------|------------|---------------------------|------------|-------|-----------------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| March | | | North | North | West | West | North | West | West |
| 27 | East | 87 | 42.48 | 42.13 | 68.06 | | | | |
| 28 | S. 55° E. | 22 | 42.31 | | 67.42 | | | | |
| 29 | S. 87° E. | 108 | 42.25 | 42.24 | 65.15 | | 42.41 | 65.42 | Az. AM 8.12 |
| 30 | S. 62° E. | 158 | 41.09 | 41.04 | 62.08 | | | | |
| 31 | S. 80° E. | 79 | 40.50 | | 60.25 | | | | |
| April | | | | | | | | | |
| 1 | S. 79° E. | 103 | 40.31 | | 58.11 | | | | |
| 2 | East | 102 | 40.30 | 40.25 | 55.57 | 00 54.35 | 40.21 | 54.49 | Az. AM 11.27 |
| 3 | N. 74° E. | 132 | 41.2 | | 53.09 | From obs. ap. 2. 51.47 | | | |
| 4 | S. 81° E. | 67 | 40.51 | 41.17 | 51.42 | Obs. of Ap. 2. 50.20 | 41.00 | 50.44 | Az. AM 15.9 |
| 5 | N. 61° E. | 111 | 42.12 | | 49.32 | Obs. of Ap. 2. 48.10 | | | |
| 6 | S. 34° E. | 109 | 41.11 | | 47.31 | Obs. of Ap. 2. 46.9 | | | |

H. Prince Master, from Salem towards Lisbon.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|--------------------------------------|--|
| S. S. E. S. W. S. E. East. | Fair, wind southerly and variable, at 6 P. M. Cape Horn Light is bore N. W. by. W. per compass, estimates distance 14 leagues. |
| East. Calm S. by E. | Moderate and fair. Hazy. Hazy, foggy weather. |
| S. S. E. Variable. N. W. by W. | Foggy. Fine breeze, cloudy. Clear, Pleasant gales. |
| N. W. W. | Clear, fine breeze. |
| N. W. S. E. N. N. E. | Fine gales, clear. Light breezes, snow, lightning. Fresh gales, squally, large sea running. |
| N. by E. West. | More moderate, heavy snow. Rainy. |
| N. N. E. Variable S. S. E. | Pleasant gales. Moderate. Fresh gales, cloudy. |
| S. S. E. S. W. W. by S. | Stormy, rainy, squally weather. very sharp lightning and heavy thunders, large sea. |
| N. N. E. N. E. S. E. | Brisk gales. More moderate, clear. Fine gales. |
| S. E. S. by W. | Brisk gales and cloudy. Rain, squally, double reef'd topsails. Brisk gales, foggys took in foreen, jib, & mainsail. |
| West N. N. E. N. | More moderate, foggy. Calm, light airs. Brisk gales, rain. |

Nathaniel Bowditch's Journal, in the Ship Astrea

| Date. 1796 | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|---------------|----------|-------|-----------------|-----------------------------------|-----------------|---------------------------------|------------|-----------|-----------------------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| April 7 | S 59° E. | 159 | North. 39.50 | North. " | West. 44.32. | West. Obs. April 2. 43.10 | North " | West " | West. " |
| 8 | S 73° E. | 118 | 39.16 | 40.28 Obs. by new 40.16 | 42.4 | Obs. April 2. 40.42 | 40.20 | 42.32 | Az. A. N. 17.17 |
| 9 | S 84° E. | 137 | 40.07 | 40.05 | 39.6 | Obs. Apr. 2. 37.44 | | | |
| 10 | S 88° E. | 110 | 40.01 | 40.06 | 36.43 | Obs. Apr. 2. 35.21 | | | |
| 11 | East | 110 | 40.06 | | 34.20 | Obs. Apr. 2. 32.58 | | | |
| 12 | N 71° E. | 39 | 40.17 | By double altitudes. 40.33. | 33.32 | 00 32.46 | | | |
| 13 | E. by N. | 99 | 40.53 | 40.58 | 31.25 | 00 31.7 | | | |
| 14 | S 69° E. | 83 | 40.28 | Double Altitudes. 40.27 | 29.44 | Obs. Apr. 12 & 13. 29.12. | 40.50 | 30.24 | P. M. Az. 23.3 |
| 15 | N 65° E. | 53 | 40.49 | 40.42 | 28.40 | Obs. Apr. 12. 13. 28.8 | | | |
| 16 | N 51° E. | 82 | 41.34 | 41.41 | 27.16 | 00 26.46 | 40.55 | 27.48 | P. M. Az. 24.49 |
| 17 | N 66° E. | 78 | 42.12 | 42.23 | 25.39 | Last Obs. 25.12 | | | |

H. Prince Master, from *Salem* towards *Lisbon*.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|-------------------------------|---|
| N. N. E. N. E. S. N. E. | Fresh gales, rain. Cloudy. Fresh gales, rain. |
| S. E. 1/4 N. W. | Brisk gales, cloudy. Variable winds & weather, rain, lightning. Pleasant breezes, fair weather. |
| N. W. 1/4 W. S. W. | Pleasant gales, fine weather. Fine breeze, hazy. |
| W. by N. N. W. by W. W. | Pleasant gales, heavy. Cloudy. Fine breezes. |
| W. N. W. N. E. | More moderate, hazy. Light air. |
| N. E. by E. E. S. by E. | Variable, light air, hazy. Fine breeze, cloudy. Took a lunar observation of the O. C. |
| S. by E. S. S. W. | Fine breeze, clear. Took a lunar observation of the O. C. |
| S. W. W. N. N. W. | Light winds, pleasant weather. Moderate, clear. Light air, cloudy. |
| N. N. W. S. by E. | Light air, variable. Moderate, rain. Fine breeze, clear. |
| S. S. E. S. | Moderate, clear, pleasant weather. Took two lunar observations, and observed the variations. |
| S. S. E. S. S. S. W. | Pleasant breezes, and cloudy. |

Prince Master, from Salem towards Lisbon.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|--------------------------------------|---|
| S. S. W. S. S. E. by S. | Moderate and clear. Observed the variation by an azimuth. |
| S. E. by S. Variable. S. S. W. | Light winds and variable. In the evening took an observation with the moon and stars, Regulus and Spica, with distances less than 30°; makes the ship 3° to the eastward of last observation. |
| S. S. W. W. S. W. W. | Fresh gales and clear. Raining. Fresh gales, and clear. Saw a ship steering N. E. |
| W. W. S. W. | Fine breezes, pleasant. More moderate, clear. |
| S. W. S. by W. | Moderate breezes and pleasant weather. This day took three azimuths; one in the evening with the sun, & two in the morning, with the sun and moon. |
| S. S. W. Variable N. E. | Light airs and clear. In the evening took a lunar observation with the stars Antares & Spica. |
| N. N. E. | Fine breezes & pleasant. At 7 am made the rock of Lisbon, bearing from point E. A. E. estimated distance 5 leagues. Which allowed as a course sailed, will make the latitude of Cape Roque 38.45 N. and its longitude from yesterday's observation 9.22 W. |
| N. E. by N. | Pleasant breezes. at 2 P.M. procured a pilot from a fishing boat, and continued standing off, and in all night, in the morning found ourselves far enough to windward to fetch in, but being inclined to a calm, we lay off till 11 A.M. when a breeze springing |
| | up we stood on and at 2 P.M. came too off Castle Bedme. which bore by compass N. W. distant $\frac{7}{8}$ of a mile, the southern shore of the river being about $\frac{9}{10}$ of a mile distant. |
| | At noon April 25. O's merid. Alt. L.B. 64 41. bar for dep th 30. + 11. O's Dec. 1331. Ship's latitude 38.39 N. at what time the fort of Corcage bore N. W. by W. by compass distant 1 mile: & a church to the eastward, about N. $\frac{1}{2}$ mile distant. Scarcely the chart, I find that the ship in that situation must have been $\frac{1}{2}$ miles S. of Cape Roque. which would make the latitude of Cape Roque 38.43 $\frac{1}{2}$. which agrees within 1 $\frac{1}{2}$ miles, of that place as given by Moore. |

Nathaniel Bowditch's Journal, in the Ship Astrea Henry

| Date. 1796 | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|---------------|----------|-------|-----------|-------|------------|-------------|------------------------------|-------|----------------------------------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| May | | | North | North | West. | West | North | West | West. |
| 6 | S 41° W. | 52 | 37.59 | 38.05 | 10.14 | | 38.9 | 9.40 | Az. A.M. 21.41 |
| 7 | S 87 W. | 24 | 37.58 | 37.57 | 10.44 | | 37.55 | 10.22 | 22. PM 23.12 |
| 8 | S 83 W. | 59 | 38.5 | 38.8 | 11.58 | | 38.2 | 11.7 | Az. AM 23.00 P.M. 22.36 |
| 9 | N. 71 W. | 59 | 38.27 | 38.32 | 13.8 | | 38.7 | 11.40 | |
| 10 | S 11 E | 38 | 37.55 | 38.02 | 12.58 | | | | |
| 11 | S 52 W | 18 | 37.51 | 37.46 | 13.16 | 06 13.12 | 38.2 | 13.6 | Az. P.M. 24.1 |
| 12 | S 55 W | 32 | 37.28 | 37.14 | 13.49 | | | | |
| 13 | S 21 W. | 117 | 35.24 | 35.18 | 14.40 | | | | |
| 14 | S 19 W. | 160 | 32.47 | 32.39 | 15.41 | | 33.35 | 14.3 | Az. AM 18.28 corrected. |
| 15 | N 82 W. | 120 | 32.55 | 32.50 | 18.3 | 16.27 | | | |
| 16 | | | | | | | In Fundamental Road 32.37 | 17.0 | Az. A.M. 20.26 |

Prince Master, from Lisbon towards Madeira.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|----------------------------------|--|
| N. W. by N. N. N. E. | First part fine breezes and cloudy, at 6 P.M. Cape Regue bore per compass $N. 84^{\circ} E.$ dist. 7 leagues, from which I take my departure being in the latitude of $38^{\circ} 45' N.$ Long. $9^{\circ} 35' W.$ |
| W by S. Calm N W. | Light airs, clear. |
| W. S. W. S. W. | Light airs, pleasant. Observed the variation by an azimuth evening and morning. |
| S. W. by S. S. W. | Light breezes and pleasant. Cloudy. |
| S. W. by W. W. S. S. | Light airs, misty rain. Cloudy Clear. |
| S. W. by W. W. S. W. | Moderate and pleasant. Took a lunar observation, which agrees with our reckoning since leaving the land. Observed also the variation by an evening azimuth. |
| S. W. by W. W. S. S. N. W. | Cloudy. Misty rain. Cloudy. Found the ship $14^{\circ} S.$ of her reckoning at noon. |
| N. W. by N. N. E. East. | Fine breezes, hazy. Misty rain. Hazy. Three vessels in sight standing to the westward. |
| E. N. E. | Fine breeze & pleasant. Observed the variation by an evening azimuth, the longitude and at the time of taking the observation is corrected by making the land May 15. |
| E. N. E. | Fine breeze & pleasant. At 9 am. made the Island of Porto Santo at 11 made the Island of Madeira. The latitude of the middle of the Island of Porto Santo is $32.58^{\circ} N.$ |
| | At 9 P.M. came to anchor at road, in 24 fathoms. Boreen head bearing per compass $S 69^{\circ} 45' E.$ Loco Rock $N 6 W.$ |

Nathaniel Bowditch's Journal, in the Ship Astrea, Henry

| Date. | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|----------|----------|-------|----------------|--------------------|---------------|-----------------------------------|-------------------------|------------------------|---|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| May 1796 | | | | | | | | | |
| 27 | S 12° W. | 105 | North 30.54 | North 31.10 | West 17.35 | West " " | North 32.12 31.35 | West 17.10 17.23 | West Az. PM 21.23 AM 21.17 |
| 28 | S 13 W | 87 | 29.15 | 29.16 | 17.54 | | | | |
| 29 | S 35 W | 128 | 28.5 | D 28.5 O 27.57 | 19.18 | Departure from Palma. 18.10 | 28.29 | 17.55 | 19.58 |
| 30 | S 25 W | 156 | 25.40 | 25.47 | 19.28 | | | | |
| 31 | S 15 W | 156 | 23.16 | O 23.30 D 23.29 | 20.11 | | 25.11 | 19.39 | Az. PM 20.16 |
| June 1 | S 14 W | 176 | 20.39 | 20.54 | 20.57 | O 20.25 | | | |
| 2 | S 14 W | 178 | 18.2 | 18.6 | 21.43 | O 20.38 | 20.14 18.28 | 20.32 20.34 | Az. PM 16.17 Az. AM 14.46 |
| 3 | S 1 W | 135 | 15.55 | 16.2 | 21.46 | Last Obs. 20.46. | 17.25 | 20.34 | Az. PM 16.57 |
| 4 | S 13 E. | 137 | 13.48 | 13.50 | 21.14 | | | | |
| 5 | S 13 E | 94 | 12.8 | 12.6 | 20.53 | | | | |
| 6 | S 24 E | 162 | 10.33 | 10.36 | 20.11 | | 11.10 | 19.38 | from last true obs. Az. PM 13.34 |

Prince Master, from Madeira

towards the Equator.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|-----------------------------------|---|
| E.S.E. N.E. by N. Variable. | First part light air, middle & latter part fine breeze. In the evening when the S.W. part of Funchal bore perpendicular N.E. and the middle of the southern desert bore E.S. the variation was observed 21.23W. From this I take my departure. |
| N.E. by N. E. by N. | Fine breeze, clear. |
| E.N.E. | Fine breeze & clear. — Latter part cloudy. At 6½ P.M. made the Island of Palma. Again saw it in the morning, and by these bearings it appears that the ship was E.S.E. of her reckoning; from this I take a new departure. |
| E.N.E. N.E. | Fine breezes & pleasant. |
| E.N.E. N.E. | Fine breezes, pleasant. |
| E. E.N.E. | Fine breeze, clear. Took two lunar observations of the sun and moon, which make the ship east of her reckoning. |
| E. by N. N.E. by E. | Fine breezes and clear. Made two lunar observations, which make the ship to the eastward of yesterday's observation. Current S. E. ½ knot 11. hour. |
| E by N. N.E. by E. | Fine breezes, clear. From our last lunar observations, it appears, that there is a current setting easterly. |
| N.E. N. to N.E. | Fine breeze, clear. |
| N.E. to N. | More moderate, variable, clear. Great tide rip. Porpoises. |
| E.N.E. to N. by E. | Light winds, variable, Tide rippling. Tide ripple for several days past. |

Nathaniel Bowditch's Journal, in the Ship Astrea

| Date. 1796 | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|---------------|----------|-------|----------------|----------------|----------------|----------------------------------|----------------|--------------------|--------------------------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| June 7 | S 15 E | 73 | North. 9.26 | North. 9.23 | West. 19.52 | West. From last Obs. 18.47 | North 10.15 | West 19.2 | West Az. 12.11 |
| 8 | S 13 E | 55 | 8.29 | ... | 19.40 | 18.35 | 8.41 | 18.39 | Az. AM 14.10 |
| 9 | S 1 E | 75 | 7.15 | 7.18 | 19.32 | | | | |
| 10 | S 57 W | 87 | 6.31 | 6.39 | 20.46 | | 6.38 | 20.78 | Az. AM 12.39 |
| 11 | S 63 W | 54 | 6.15 | ... | 21.34 | | | | |
| 12 | S 7 E | 61 | 5.14 | | 21.27 | | | | |
| 13 | S 23 W | 31 | 4.45 | 5.27 | 21.39 | | 5.35 | Corrected. 18:0 | Az. AM 9.34 |
| 14 | S 6 W | 35 | 4.52 | 4.45 | 21.43 | | | | |
| 15 | S 43 W | 39 | 4.17 | 3.53 | 22.10 | * D * 16.59 | 4.35 | 16.46 | Az. AM 9.44 |
| 16 | S 48 W | 89 | 2.52 | 2.51 | 23.16 | * D * 18.20 | 3.46 3.13 | 17.19 18.0 | Az. AM 14.55 12.15 |
| 17 | S 17 W | 107 | 1.9 | 1.37 | 23.48 | From last Obs. 10.52 | | | |

H. Prince Master, from Madras towards the Equator.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|--|--|
| E. N. E. to N. E. | Winds light and variable, in the night rain and lightning, often very squally but did not blow fresh. |
| North to West. | Light variable winds, squally, little rain. |
| S. E. E. N. N. E. N. | Winds variable, squally, thunder, lightning, at times clear. |
| Variable. S. S. E. S. | Winds variable, squally. |
| South | Light air and pleasant. Number of sharks and, |
| Variable N. W. S. W. W. N. W. | Variable weather, nearly calmed times. |
| S. E. by E. S. E. | Light air and pleasant. Found the ship 42' North of her reckoning. The longitude is, at the time of observing the variation, was corrected by the observations of June 15, 16. |
| E. S. E. S. S. S. E. | Moderate breeze & fair, in the morning a small shower. Took two lunar observations of the sun and moon. The variation this day differs very much from yesterday's observation. |
| S. P. E. S. E. E. South | Moderate and pleasant; latter part fine breeze. Ship 24' S. of her reckoning at noon. Took a lunar observation. |
| S. S. P. E. S. W. | Fine breeze, clear, pleasant weather. Took two lunar & magnetic observations. |
| S. E. | Fine breeze, clear. Porpoises around. Strong northerly current |

Nathaniel Bowditch's Journal, in the Ship Astrea Henry

| Date. 1796 | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|---------------|----------|-------|---------------|---------------|--------------|----------------------------------|----------------------|------------------------|--|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| June 18 | S 50 W | 105 | 0.29 N. | 0.48 N. | West 25.8 | West. from last obs. 20.12 | North 1.25 1.0 | West 19.12 19.52 | West 10.34 12 AM 11.7 |
| 19 | S 38 W | 100 | South 0.31 | South 0.17 | 26.9 | from last obs. 21.13 | 0.33 0.38 | 20.27 20.58 | 12 PM 10.10 12 AM 9.35 |
| 20 | S 39 W | 107 | 1.43 | 1.41 21.39 | 27.16 | * 20 * 22.00 | 0.38 1.20 | 21.25 21.58 | 12 AM 8.43 28.44 9.14 9.36 |
| 21 | S 41 W | 102 | 3.17 | 3.16 | 27.56 | 23.00 | 2.98 | 22.9 | 12 PM 8.30 |
| 22 | S 41 W | 128 | 5.24 | 5.32 | 27.59 | 23.13 | 3.44 5.3 | 23.6 23.10 | PM 7.42 AM 7.45 |
| 23 | S 41 W | 139 | 7.50 | 7.44 | 28.20 | 23.49 | | | |
| 24 | S 42 W | 109 | 9.31 | 9.31 | 28.45 | 24.29 | 8.11 9.5 | 23.22 23.40 | PM 12 6.47 AM 12 6.5 |
| 25 | S 42 W | 82 | 10.46 | 10.55 | 29.17 | 25.16 | 9.54 | 24.40 | AM 12 5.58 |
| 26 | S 41 W | 49 | 11.41 | 11.48 | 29.37 | 25.51 | | | |
| 27 | S 35 W | 83 | 12.56 | 12.55 | 30.26 | 26.56 | 12.4 12.49 | 25.25 25.42 | 4.35 4.24 |
| 28 | S 31 W | 80 | 14.04 | 14.18 | 31.8 | 27.48 | 13.12 | 27.9 | PM 12 4.18 |

Prince Master, from the Equator

towards the Cape of Good Hope.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|-------------------------------------|--|
| S. S. E. S. by E. | All this day fine breezes and clear Strong northerly current. |
| S. S. E. | Fine breezes & clear. Strong Northerly current. Tide up. At 8 A.M. crossed the equator in the longitude of 28° W. |
| S. S. E. | Fine breezes & fair. |
| S. E. Variable S. E. by E. | First part fine breeze & fair. Middle part, variable & squally; latter part pleasant breeze. |
| S. E. E. by S. | Fine breeze, & pleasant, excepting a small squall at midnight. |
| S. E. by E. S. E. S. E. by E. | Fine breeze, fair, clear weather. |
| S. E. by E. | Fine breeze & fair. |
| S. E. South. | Fine breeze, clear. |
| S. by E. S. E. S. E. | Variable weather & winds, squally, sometimes calm. |
| S. S. E. S. E. | Fine breeze & pleasant. |
| | First part fine breeze & pleasant, latter part squally. |

North. Bousfield's Journal, in the Ship Astrea Henry

| Date. 1796 | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|---------------|----------|-------|-----------------|--------------------|----------------|-----------------------------------|--|--|------------------------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| June 29 | S 48. | 128 | South. 16.26 | South 16.18 | West. 30.59 | West. O C 27.48 | South 14.36 | West P.M. az. 27.48 | West M. az. 43.4 |
| 30 | S 11 W. | 144 | 18.42 | O 18.39 D 18.36 | 31.1 | O C Mean of last obs. 27.48 | 18.5 | P.M. az. 27.48 | 2.41 |
| July 1 | S 11 W. | 132 | 20.48 | O 20.46 D 20.45 | 31.29 | O C Mean of last obs. 28.5 | Near Trinidad. See note at end in page | | 2.36 |
| 2 | S 5 W. | 108 | 22.34 | O 22.39 D 22.36 | 31.38 | 28.19 | 24.14 22.14 | P.M. az. 28.8 A.M. az. 28.16 | 2.12 2.3 |
| 3 | S 23 W. | 62 | 23.36 | 23.41 | 31.11 | 27.57 | | | |
| 4 | S 29 E | 80 | 24.46 | 24.42 | 30.31 | 27.22 | 23.53 24.22 | P.M. az. 27.48 A.M. az. 27.32 | 2.41 1.21 |
| 5 | S 55 E. | 145 | 26.05 | 26.08 | 28.09 | 25.5 | | | |
| 6 | S 64 E | 112 | 26.49 | 26.52 | 26.17 | 23.18 | 26.22 | P.M. az. 27.0 | 3.58 |
| 7 | S 67 E. | 102 | 27.33 | 27.25 | 24.32 | 21.38 | 26.56 | P.M. az. 22.53 | 4.0 |
| 8 | S 72 E | 172 | 28.18 | 28.18 | 21.26 | 18.37 | | | |
| 9 | S 87 E | 110 | 28.20 | 28.20 | 19.22 | O C 16.39 | | | |

Comparison of
Observations of
July 1 and 9th

Prime Master, from the Equator towards the Cape of Good Hope.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|-------------------------------------|--|
| East E. by S. E. S. E. | Fine breeze & pleasant. |
| E. S. E. | Fine breeze & pleasant. |
| E. by S. S. E. by E. | Fine breeze & pleasant. |
| E. S. E. | Pleasant; at noon more moderate. |
| E. E. N. E. N. N. W. | Moderate & pleasant. |
| N. N. W. N. | First part moderate; latter part fine breeze & clear. |
| N. W. to N. by W. | Fine breeze & cloudy. Sun eclipsed, invisible to us, the sun being set before the shadow touched the earth. |
| N. N. W. N. W. S. W. South | First part, brisk gales, middle part, squally, with rain; latter part moderate & pleasant. |
| S. S. W. W. N. W. | First part fine breeze & clear, middle, moderate & pleasant; latter, squally, cloudy &c. |
| W. N. W. S. W. S. S. W. | Brisk gales, squally, thunder lightning, rain. Drums reefed topsails, hoisted top gallant masts &c. Heavy sea running. |
| S. S. W. | First part brisk gales & squally. Middle part more moderate, moderate. Latter part all sail set; large swell from the S. S. W. |

Nathⁿ Bowditch's **Journal**, in the Ship *Astrea* Henry

| Date. | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|-----------|----------|-------|-----------|-------|---------------|--------|------------|-------|--------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| July 1796 | | | | | | | | | |
| 10 | S 54 E | 100 | 29.12 | 29.12 | 17.44 | 15.4 | 28.26 | 16.15 | 7.53 |
| 11 | S 63 E | 152 | 30.20 | 30.20 | 15.8 | 12.33 | 29.30 | 15.33 | 7.49 |
| 12 | S 58 E | 178 | 31.54 | 31.50 | 12.12 | 9.7 | 31.31 | 10.13 | 10.4 |
| 13 | S 68 E | 119 | 32.36 | 32.34 | 10.24 | 6.49 | | | |
| 14 | S 65 E | 99 | 33.15 | 33.9 | 8.16 | 4.11 | 32.59 | 7.54 | 12.40 |
| 15 | S 70 E | 135 | 33.55 | 34.0 | 5.44 | 1.9 | 33.19 | 3.38 | 13.28 |
| 16 | S 72 E | 169 | 34.52 | 34.55 | 2.29 | 2.35 E | 34.10 | 0.34 | 14.58 |
| 17 | S 70 E | 155 | 35.49 | 35.51 | East. 0.29 | 5.24 | | | |
| 18 | S 77 E | 133 | 36.28 | 36.23 | 3.9 | 8.5 | 35.58 | 5.53 | 16.56 |
| 19 | S 85 E | 152 | 36.34 | 36.26 | 6.17 | 10.54 | 36.31 | 8.43 | 20.35 |
| 20 | East | 188 | 36.26 | 36.08 | 10.9 | 14.37 | 36.23 | 11.36 | 21.20 |

Prince Master, from the Equator towards the Cape of Good Hope.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|--|---|
| S. S. W. Variable S. W. To West. | Fine breeze & pleasant. |
| W. S. W. W. to S. W. | Fine breeze & pleasant, heavy swell from W. S. W. |
| N. W. W. S. W. by W. | First part brisk breeze & squally, double reefed top sails. At 8 ^h more moderate, and reefed. |
| S. W. Variable S. W. to N. W. | Fine breeze & pleasant, latter part lightning, cloudy. Large swell from S. S. W. |
| W. N. W. N. by W. | Light airs, latter part fine breeze & clear. all sail set. |
| N. by E. to N. W. | Fine breeze, clear, pleasant weather. |
| N. E. by N. | First part fine breezes & pleasant. At 8 P.M. squally. latter part fine breeze & cloudy. |
| N. E. by N. | Fine breeze & pleasant, excepting a few squalls about 9 P.M. |
| N. E. by E. to S. W. West. | Squally, winds variable, heavy rain, in morning double reefed topsails, but at noon all sail set. |
| Variable. W. N. W. to N. N. E. W. N. W. W. to S. W. | Brisk breezes, variable weather, squally, rain, clear. In the evening saw a very bright lunar rainbow. |
| S. W. S. W. To W. N. W. | All these 24 hours, squally, rainy weather, landed many seals & musk terrail: & double reefed topsails & heavy sea. |

Math^{rs}. Bowditch's Journal, in the Ship Astrea Henry

| Date. | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|--------------|----------|-------|--------------|-------------------|------------|------------|------------|--------------------------|-----------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| July 21 1796 | East | 201 | South 36° 8' | South 36° 4' | East 14.17 | East 18.37 | | | |
| 22 | S 77° E | 171 | 36.41 | 36.4 | 17.42 | 21.54 | 36.4 | 20.29 | 22. 24.47 |
| 23 | S 66 E | 179 | 37.15 | 37.8 | 21.6 | 25.10 | 36.16 | Az. P.M. 22.46 | 24.35 |
| 24 | S 76 E | 167 | 37.43 | 37.22 | 24.21 | 28.17 | 37.20 | Az. A.M. 28.03 | 26.45 |
| 25 | S 29 E | 130 | 37.47 | 37.54 | 27.5 | 30.53 | 37.30 | Altitude of Venus. 28.52 | 28.31 |
| 26 | S 81 E | 48 | 38.2 | 37.540 37.59 A | 28.5 | 31.45 | 37.38 | Az. P.M. 31.8 | 29.0 |
| 27 | S 72 E | 145 | 38.40 | 38.22 | 31.0 | 34.30 | 38.22 | | |
| 28 | S 87 E | 146 | 38.31 | 38.43 | 34.6 | 37.43 | 38.22 | Az. P.M. 35.16 | 27.59 |
| 29 | E 14 N | 120 | 38.8 | 37.50 | 36.22 | 40.5 | 38.30 | Az. P.M. 38.78 | 29.0 |
| 30 | E 5 N | 140 | 37.36 | 37.49 | 39.18 | 43.9 | 37.50 | Alt. P.M. 40.30 | 28.26 |
| 31 | N 67 E | 106 | 37.7 | 36.54 | 41.22 | 45.9 | | | |

Prince Master, from the Equator towards the Cape of Good Hope.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|-------------------------------|---|
| S. W by S. | All these 21 hours fresh gales & squally, double reefed &c. Heavy sea running. |
| S. W. | First part fresh gales and squally; latter part more moderate, set reefs, and set shrouden sails. Latitude by account & observation differ 37 miles, owing to the Mozambique current. |
| S. W. W. S. W. W. N. W. | First part fresh and squally; middle and latter part more moderate; at times, small rain squalls. |
| W. N. W. | Clear, pleasant weather, fine breeze. |
| N. W by W. S. S by E. | Clear and pleasant, except in the night, when it was a little squally. This evening observed the magnetic bearing of the Planet Venus N. 31° E. |
| S. S. E. to E by N | Moderate & hazy, large swell from the N. W. |
| E. N. E. N. E. | First part fine breeze, cloudy. - At 8 P.M. squally, heavy sea, double reefed topsails & sent down T.G. Yards. &c. |
| N. E. N. N. E. | Brisk gales, clear; latter part, sharp lightning to the westward. |
| N. N. E. N. | Fine breeze & pleasant; Saw three sperm whale's. |
| N. N. W. | Moderate & pleasant; great dew falling in the night. |
| N. N. W. S. S. E. E. | Moderate, clear; latter part cloudy. Dutidos & Albitos around the ship. |

Nathaniel Bowditch's Journal, in the Ship *Aslee*, Henry

| Date. 1796 | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|---------------|----------|-------|-----------|-------|------------|-----------|------------|------------------|--------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| August 1 | S 82 E | 121 | 37.2 | 37.9' | 43.52 | 47.25 | 37.6 | East az. P.M. | 27.37 |
| 2 | N 78 E | 114 | 36.38 | 9 | 46.11 | 49.50 | 36.57 | az. P.M. | 28.28 |
| 3 | S 83 E | 167 | 36.59 | 37.18 | 49.47 | 53.22 | 37.12 | az. A.M. | 26.59 |
| 4 | N 76 E | 126 | 36.48 | 36.41 | 52.22 | 55.53 | 36.43 | az. P.M. | 27.16 |
| 5 | S 89 E | 172 | 36.51 | 36.52 | 55.57 | 59.24 | 36.51 | az. P.M. | 23.12 |
| 6 | S 87 E | 210 | 37.3 | 37.48 | 60.19 | 63.43 | | | |
| 7 | E 11 S | 166 | 37.37 | 37.9 | 63.42 | 67.01 | 37.8 | az. A.M. | 20.23 |
| 8 | East | 191 | 37.9 | 37.6 | 67.41 | 70.56 | | | |
| 9 | N 86 E | 159 | 36.56 | 36.45 | 70.59 | * 71.13 * | | | |
| 10 | N 89 E | 131 | 36.53 | 36.56 | 73.42 | 76.44 | | | |
| 11 | E 14 S | 188 | 37.40 | | 77.30 | 80.20 | | | |

Prince Master, from the Cape of Good Hope towards the Island of St Paul.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|------------------------------------|--|
| East N.E. N by E. | First part moderate & cloudy. Latter, fresh breeze & clear. Pintados & Albitos around. |
| N. NW to W. S. E. | First part fine breeze & clear. At 10 P.M. black clouds rising to the W. winds fluky, took in sudden squalls; as the clouds rose the wind hauled from N.W. to W. & S. when it came to the S. it rained very much, and was almost calm. At noon the wind was East, with small rain. |
| E. N.E. to N.W. S.W. | First part light winds & variable, at 3 P.M. hauled gradually to the northward, & became clear & pleasant, sometimes fluky. Pintados & Albitos. |
| N.W. S. S.W. to N.W. | First part brisk breeze & cloudy. At 5 P.M. the wind in a light squall hauled to the southward, with rain, at 4 A.M. more moderate, and hauled to the N. latter part fine breeze & cloudy. Morning & evening currents differed considerably. Hagood, Pintados |
| N.W. to W. W.N.W. N.W." | Generally fine breeze & pleasant, a few squalls with rain. No other place where the wind hauled to the Northward of E. it remains sometimes, when it lightens to the westward it is almost a sure sign that the wind will shift from the north to W. & in the latter part it becomes moderate. |
| N.W. N. W.N.W. | Fresh breezes, squally with rain. When the wind is Northwesterly, it is generally a fine breeze. Notwithstanding it has often lightened with us since passing the Cape, yet we have not heard it thunder. |
| W.N.W. | Fresh gales, cloudy, large sea from the N.W. latter part small rain. |
| W by N to S.W. W.N.W. | Fresh gales & squally, single reefed the topsails; hail. Latter part clear, but very cold. |
| S.W. to S. | Fresh gales, and heavy squalls with rain & hail; at times, very clear. |
| S. S.W. to W.N.W. | First part squally with rain; latter part pleasant, clear weather, all sail set. |
| W.N.W. W.N.W. to S.W. W.N.W. | Fine breeze & cloudy; at times, squally: middle part, steady breeze & small rain; at 5 A.M. the wind hauled to the S.W. & moderated. at 11 P.M. hauled more to the westward. latter part fresh small rain. |

Nathl^r Bouditch's Journal, in the Ship Astrea, Henry

| Date. 1796 | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|---------------|----------|-------|-----------|--------|------------|----------------|------------|-------|--------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| August | | | South. | South. | East. | East. | South. | East | West |
| 12 | N 69 E | 184 | 36.34 | 36.12 | 81.04 | 83.42 | | | |
| 13 | E 12 N | 161 | 35.39 | 35.39 | 84.19 | 86.45 | 35.46 | 86.18 | 12.56 |
| 14 | E 11 N | 186 | 35.3 | 35.8 | 88.2 | 90.16 | | | |
| 15 | N 65 E | 156 | 34.2 | 34.1 | 90.54 | * D * 92.56 | 34.51 | 88.45 | 13.28 |
| 16 | N 59 E | 110 | 33.4 | 33.10 | 92.48 | 94.6 | | | |
| 17 | N 62 E | 134 | 32.6 | 32.5 | 95.8 | 95.42 | | | |
| 18 | N 31 E | 171 | 29.40 | 29.43 | 96.52 | 96.43 | | | |
| 19 | N. N. E | 123 | 27.49 | 27.56 | 97.46 | * D * 97.12 | | | |
| 20 | N 19 E | 91 | 26.30 | | 98.20 | 97.50 | | | |
| 21 | North | 22 | 26.8 | 25.58 | 98.20 | 97.52 | | | |
| 22 | N 37 W | 35 | 25.30 | | 97.57 | 97.31 | | | |

Prince Master, from the Island of St Paul towards Java Head,

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|-------------|---|
| N. W. | Fresh gales, squally, rain, large sea, close reefed topsails &c. |
| W. | At 1 P.M. hauled to the northward, as we no longer saw the preceding moon; & judged ourselves nearly up with the Island of St Paul. |
| W. by S. | Latter part fresh gales, heavy squalls, thunder, lightning & rain. |
| W. by S. | Fresh gales & heavy squalls, large sea; middle part more moderate; |
| W. by N. | but towards noon the gale increased. |
| N. W. by N. | Passed a number of bunches of seaweed. |
| W. N. W. | Brisk gales, cloudy, large sea; pulled several bunches of kelp. |
| W. N. W. | Brisk gales, head sea, squally. clear. No seaweed this day. |
| N. W. | Pterods & Pintails |
| N. by W. | |
| N. by W. | Fresh gales, large sea, rain. |
| N. by W. | |
| N. by W. | |
| N. by W. | |
| N. by W. | |
| N. by W. | |
| N. by W. | |
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| N. by W. | |
| N. by W. | |
| N. by W. | |
| N. by W. | |
| N. by W. | |

North's Boudle's Journal, in the Ship Astrea, Henry

| Date. 1796 | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|---------------|----------|-------|----------------|-------|---------------|-----------------|----------------|--|--------------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| Aug. 23 | N 30 W | 76 | South 24.14 | South | East 97.09 | East. 96.45 | South | East | West. |
| 24 | N 59 E | 22 | 24.3 | 24.19 | 97.29 | + 2 + 97.5 | | | |
| 25 | N 68 E | 83 | 23.48 | 23.52 | 98.53 | * 0 0 99.3 | 24.15 24.9 | Ar. P.M. 97.35 Ar. A.M. 98.33 | 4.59 3.11 |
| 26 | N 46 E | 59 | 23.12 | 23.9 | 99.39 | * 0 0 99.59 | 23.40 | Ar. P.M. 99.17 | 3.33 |
| 27 | N 30 E | 58 | 22.19 | 22.29 | 100.11 | * 0 0 100.40 | 23.0 22.43 | Ar. P.M. 100.10 Ar. A.M. 100.36 | 4.14 2.7 |
| 28 | N 29 E | 90 | 21.10 | 21.17 | 100.58 | * 0 0 101.30 | 22.15 | Ar. P.M. 100.52 | 3.58 |
| 29 | N 17 W | 45 | 20.33 | 20.44 | 100.48 | * 0 0 101.24 | 20.49 | Ar. A.M. 101.26 | 2.47 |
| 30 | N 41 E | 23 | 19.34 | 19.31 | 101.53 | 101.55 | | | |
| 31 | N 31 E | 145 | 17.27 | 17.17 | 103.10 | 102.37 | 17.55 19.10 | Ar. P.M. 102.5 Ar. A.M. 102.27 | 1.54 0.50 |
| Sept. 1 | N 17 E | 145 | 14.58 | 14.54 | 103.44 | 102.37 | | | |
| 2 | N 19 E | 132 | 12.53 | 13.0 | 104.29 | 102.47 | 13.30 | Ar. A.M. 102.45 | 0.17 |

Princ Master, from the Island of St Paul towards Java Head,

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|--|--|
| Calm. N.E. | First part calm, rainy weather: middle part, fine breeze & clear. Latter part squally, thunder lightning & heavy rain, caught 5 hogheads of water. |
| Calm N. N.E. by N. | Light air & clear, large swell from the eastward. |
| N by E to N by W. | Light air & very clear weather. |
| N. N. W. variable. W. N. W. | Moderate breeze & clear weather. |
| N.W. by S.W. S. to E. S.W. to S.E. S.E. | Light air & very clear. Magnetical observations of the morning & evening differ considerably. |
| S.E. E. S.E. E. | First part light air; latter part, more breeze & cloudy, with rain. Saw a waterspout to windward. |
| E.N.E. N.E. | Light air & clear. |
| Calm E.S.E. S.E. S.E. by E. | Remains in calm; at 6 P.M. a small breeze sprang up, which continued increasing till noon; cloudy. Tropic birds. |
| S.E. by E. | Begins with a fresh breeze & squally - comes on cloudy - Latter part, fine breeze & clear. Tropic birds, gannets. |
| E by S E.S.E. E. | Fine breezes & pleasant, — Tropic birds |
| E by S E.S.E. | Fine breezes & pleasant. Tropic birds. |

Prince Master, from the Island of St Paul's towards & in the Straits of Sunda.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|--|---|
| E. by S to E.S.E. | Pleasant breezes & clear weather. |
| E.S.E. | Pleasant, fine breeze |
| E. by S. | Fine breeze, & pleasant. At 7 P.M. the whole horizon appeared of a perfect milk colour, found it was afterwards owing to a cylindrical substance like a jelly. By lunar obs. found we were set to the westward. |
| E. by S. | Moderate & fair. First & middle part very clear, latter cloudy. The lunar observation yesterday saved us from falling to leeward, as we were going with the wind free, but immediately after taking the obs. we took in sudden squalls, & braced up sharply. |
| S.E. S.W. | First fine breeze & pleasant; then, cloudy; & latter part moderate & clear. at 1 P.M. according to expectation made the land of Java, Java Head bearing E. S. E. distance 13 leagues, entered the straits by the passage between Prince's Island and Java. |
| S.W. to W. N. W. 168 from Java Head. S.E. | Light airs and variable, no current at the beginning of the day; but at 3 P.M. when Pinelau bore W. N. W. 6 leagues, current began to set to the W. S. W. nearly 2 knots per hour, sounding from 20 to 30 fathoms. Finally, the current ran so strong that we came too between Java and Good Hope. |
| Calm light airs. | Calm clear weather, current setting W. S. E. 1 1/2 knot, got under way but could not stem the current; we drifted to leeward, & not keeping the Java Head enough aboard. |
| At 10 calms. S.E. | Light airs, at times, calm. At 2 P.M. small breeze spring up from the S. E. W. At 6 noon the Cape bore E. by N. dist 2 miles. Soundings 23 to 50 fathoms. |
| | First part light airs & variable, current setting south 1 1/2 knot, found we could not stem it at 5 1/2 came too in 25 fathoms, then Cape bearing E. S. E. & distance N. E. E. current running S. E. W. 2 knot. |
| N. | First part of day 24 hours breeze from N. weather very sultry, current setten, S. E. W. 1 1/2 knot, which was its direction when we got under way, at 4 A.M. its velocity in that direction continued till about 10 A.M. when it was 3 hours after the moon had passed the meridian, when it was 2 1/2 knots, after which it decreased to 12 A.M. was 1 1/2 knot, at 2 was 3/4 knot. At noon North Island bore W. 16° S. distant 4 leagues. Sounded 25 fathoms. |

Nathaniel Bowditch's Journal, in the Ship Astrea Henry

| Date. | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|-------------------|----------|-------|-----------|----------------------------|------------|------|---|-------|--------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| 1796 Sep 13 | | | | South 5.7 $\frac{1}{2}$ | | | Nearly abreast of the S. S. S. S. 5.78 | | 0.16 W |
| 14 | | | | 4.22 | | | | | |
| | | | | | | | In the evening when the Brothers were Sby W. 23 leagues. the Variation per azimuth was | | 0.71 W |
| | | | | | | | In the morning in the Latitude of 5.408 Var. | | 1.53 E |
| 15 | | | | | | | | | |
| 16 | | | | 2.8 | | | Between 38 $\frac{1}{2}$ points of Bara. Az. A. M. | | 0.54 E |

Prince Master, from the Straits of Sunda towards Banca.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|------------------------------|--|
| ESE, | First port light airy & variable, at 3 P.M. the current was setting on the Sumatra shore, came too 17 fath. shells. North Island bearing S.W. distant 3 1/2 leagues, current running S.W. by S. 1 knot. at 7 A.M. current abated, got under way, fair breeze from ESE. cleared. |
| | N.E. fair course, soundings 14 to 9 fathoms. At noon we were nearly abreast of the Brothers, the distance of the southernmost being about 4 miles. |
| ENE 8. SE. | First port light airy & clear, course from 12 to 4 P.M. N.E. 2 knots per hour. soundings 10 to 7 fath. At 6 P.M. two Brothers were S by E. 2 1/2 leagues distant, till 9 P.M. sailed but little, then shoaled the water from 7 to 6 fath. next cast 5 1/2 fath. the 4 1/2 fath. hard bottom; was immediately came too; current setting S. 1/2 knot. At midnight the wind hauled to E.S.E. got under way, sailed till 4 A.M. N.E. 2 knot, soundings 5 to 7 fath. gradually deepening as we hauled off shore. The place where we shoaled our water so suddenly was |
| | about mid way between the Shabunder & the bank which runs off Talambuang river. The soundings we have found, do not agree with those of Lauroe & Phillet's charts. & in some places they are very irregular. |
| E. S. E. | Pleasant breeze & hazy, from 12 to 4 P.M. soundings 11 to 7 fath. steering N.W. 3 knot per hour. At 4 A.M. jugged ourselves nearly abreast of Lucopera, came to anchor, and in the morning saw a bearing N. 3 leagues distant, got under way, the current setting S. & it continued to do so till about 11 A.M. (1 hour before the I came to the meridian, when it was still water, At noon Lucopera bore S 61 E dist 8 miles. |
| E. S. E. in 6 S. East. | First port fine breeze & pleasant, steering N.W. by N, soundings from 15 to 4 fath. at 2 P.M. abreast of the 1st point of the Straits of Banca, at 7 A.M. hauled in bank nearly abreast of 2d point, which was called 10 fath. bank in the Directory; on it, we suddenly shoaled from 10 to 7 to 5 1/2 fath. |
| | hard bottom; hauled to the northward & soon deepened to 12 fath. found irregular soundings from 7 to 17 fath. at noon a ship was bore N.E. dist 10 miles. the first part of this day the current set Northward at the rate of three miles per hour, but the latter part it set to |
| | the Southward, off the Sumatra shore, rufed by many drift trees, some of them, at first, resembling pines; saw several gillies, & snakes, & fish long, resembling those on land. |
| | The soundings between 4th point & the north part of Banca Straits are not marked enough on the charts by 2, 3 & 4 fath. the greatest on the chart being 15 fath. whereas we had 17 & 18 fath. in several places. |

Nathaniel Bowditch's Journal, in the Ship *Albatross* Navy

| Date. 1796 | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|---------------|----------|-------|--------------|---------------|------------------------------|-------------------------------|------------|-------|--------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| Sep 17 | | | | 0.518 | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| 18 | N 18 E | 62 | North 0.8 | North 0.19 | East of Palo Taya 0.34 | | | | |
| 19 | N 4 W | 69 | 1.28 | 1.45 | 0.25 | | | | |
| 20 | N by W | 36 | 2.20 | 2.32 | 0.18 | | | | |
| 21 | N 3 W | 71 | 3.43 | 3.49 | W. of Palo Damar 0.8 | | | | |
| 22 | N 1 E | 123 | 5.52 | | 0.6 | | | | |
| 23 | N 4 E | 76 | 7.5 | 7.5 | 4.12 E | 00 106.57 | | | |
| 24 | N 1 E | 113 | 8.51 | 8.38 | 0.32 E | W. of Palo Damar 107.38 | | | |
| 25 | N 50 E | 129 | 9.59 | 9.59 | 1.57 E | 06, 23 Sep. 108.54 | | | |

Prince Master, from Banca towards Pulo Sapata.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|------------------------|---|
| E N.E. S.E. | First part light and variable, middle, more breeze; latter, pleasant, sounding from 10 to 7; at 5 P.M. the wind blanketing round Banca then from the Northward, which headed as upon the Samarang shore where we sailed for some time on 4 1/2 fath. winds. as we cleared the straits the winds headed more to the Northward, & we steered more easterly we deepened the water; current all day setting to the westward, in the morning discovered the 7 Islands, at 8 A.M. |
| S.E. to E. | saw Pulo Taya. At noon the middle of this Island bore W by N. N. is the northernmost of the 7 Islands S.E. by S. Passed several bunches of weed, like that seen in the Gulf of Florida. |
| E to S.E. | Moderate & pleasant, sounded from 18 to 23 fath. sand. the water of the same blue color as in the open ocean. At 5 P.M. Pulo Taya bore W by S. 1/2 S. 7 or 8 leagues distant. |
| E to S.E. | Moderate & clear, current set the ship 17' to the northward; at midnight cloudy, in the morning a little rain; soundings from 24 to 35 fath. dark sand & shells. |
| E. S.E. | All these 24 hours light air & very falling, soundings 27 to 45 fath. dark shells. At 7 A.M. discovered the little Island of Timor, at noon it bore N.E. dist 11 miles. |
| S.E. to S.W. | Begins light & clear, pleasant, warm; ends with a fresher breeze, sounded 45 fath. At 2 1/2 P.M. Pulo Dornar bore E. & E. being in the same range with the southernmost high land of the Great Andaman. |
| S.W. to S.W. by W. | Brisk breezes & squally; for the first time since crossing the equator saw the Polar Star. By trigonometrical observations made yesterday I found that Pulo Dornar was 144 feet in height & 400 feet diameter. |
| S.W. to W.N.W. | First part moderate & clear; latter part brisk breezes & rain. at 11 P.M. sounded 32 fathoms. |
| W.N.W. to S.S.W. | First part fine breeze & cloudy, middle part, squally; latter, fine breeze. At 4 A.M. sounded 20 fath. At 6 A.M. saw Pulo Candore bore N. & N.W. dist 7 leagues. Hence the current has set us 65'E. since left P. Dornar. |
| W.P.W. | First & latter part variable & squally, middle fine breeze & pleasant. At 7 A.M. made P. Sapata, at noon it bore N.W. by W. 1/2 W. dist 8 miles. |

1847

Journal, in the Ship Ashra, Henry

[illegible]

Princ Master, from Palo Sapata towards Manilla.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|---|--|
| W. N. to S. W. S. W. to N. W. S. W. | Winds variable, squally, rain. great number of pieces of coral floating on the water. |
| S. W. | Squally, with rain. |
| S. W. S. E. S. W. | Fresh breeze & squally. |
| S. S. W. | Moderate & pleasant. |
| W. P. W. | Light winds & pleasant |
| W. P. W. S. W. | First part moderate & pleasant; latter part fresh & squally. |
| S. W. S. E. | <p>All these 24 hours, thick, squally, rainy weather, at 11 being very thick, here too, at 12 large ship, in the morning made the land, being the Island of Lubon; at 6 A. M. boat the bore 8 by distant 6 or 7 leagues, consequently, by our reckoning, Goat Island is 118.2 E. its long by the directory being 119.55. consequently the error of the reckoning 1.53.</p> |
| | See Harbor journal at the end. page 231. |
| | |
| | |

Nathl^r Bowditch'sJournal, in the Ship *Astrea*, Henry

| Date. 1796 | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|---------------|----------|-------|----------------|-----------------------|--------------------------------------|--|------------|-------|--------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| Dec 12 | W by S. | 129 | North 13.30 | North 13.4 | East 117.18 | East | N. | E. | |
| 13 | W 4 S. | 118 | 12.50 | 12.40 | 115.20 | | | | |
| 14 | W 3 N | 106 | 12.55 | 12.32 | 113.33 | | | | |
| 15 | S 65 W | 123 | 11.40 | 11.26 | 111.40 | By an Eclipse of the Moon 112.4 | | | |
| 16 | S 39 W | 123 | 9.50 | 9.43 | 110.21 | By eclipse 109.34 | | | |
| 17 | S 70 W | 138 | 8.55 | 8.28 | 108.16 | By eclipse 107.29 | | | |
| 18 | S 36 W | 95 | 7.11 | 7.12 | along W of Polaris due 0.23 W. | By eclipse 106.32 | | | |
| 19 | S 5 W | 117 | 5.24 | 5.16 | 1.8 W | By eclipse 105.47 | | | |
| 20 | S 25 W | 126 | 3.22 | 3.15 | 2.0 W | By eclipse 104.55 | | | |
| 21 | S 34 W | 137 | 1.24 | 1.0 | Prime P. Time 1.11 E | | | | |
| 22 | S 3 W | 113 | 0.53 S | 0 1.10 S. 0 1.8 S. | 1.3 E | | | | |

Prince Master, from *Manilla* towards *Banc*.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|-------------------|---|
| N by E N. | At 12 O'clock took new departure from Goat Island, bearing E 7 or 8 leagues. Fresh breeze & heavy sea. |
| N. | Middle part of these 24 hours fresh gales & heavy sea from the northward, shipping much water on deck. Latter part fresh gales & heavy sea, cloudy, with small rain. |
| N. | First part fresh gales & heavy cross sea; latter part, more moderate. |
| N. | All these 24 hours fresh gales & large sea, shipping much water on deck; rain, squally. In the evening observed the beginning & end of a lunar eclipse, which make the longitude 112.4 E. |
| N by E. | Fresh gales and large sea running. |
| N by E. | First part fresh breezes & fair; at midnight sounded 50 fathoms, coarse red & white sand; latter part more moderate, light sea. at noon sounded 25 fath. Current set us 27 miles to the southward. |
| N. N. E. | Pleasant gales & fair. At 3 P.M. made Oulo Condore bearing N by N. 7 leagues, at 4 P.M. it bore N. W. dist 5 leagues. when the sounding was 22 fath. |
| N. by N. | First part fine breezes & pleasant, at 8 P.M. sounded 32 fath. mud. Middle & latter part fine & pleasant. |
| N by E to A | Fine breeze & clear; middle part, a little squally. Just at noon made Pulo Timor bearing S by E, distant 6 leagues. At 8 P.M. in lat. 4. 35 N. sounded 40 fath. sand. Current ever since sailing has been from the a little westerly. |
| N. N. E. | Fresh breeze & pleasant, at 3 P.M. made Pulo Pisang bearing S by E, dist 6 leagues, at 5 P.M. made Pulo Taya. Very heavy. |
| N by E. | Fine breeze & pleasant, Sounded 20 to 16 fath. sand. At 10 A.M. discovered the 7 Islands. The water has been discoloured ever since passing P. Sapata. Weather Very heavy. |

Na. M^o Bowditch's **Journal**, in the *Ship Astrea, Henry*

| Date. 1796 | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|----------------|----------|-------|---------------|---------------|------------|--------|------------|-------|--------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| Dec. 23 | South | 46 | South 1.56 | South 2.11 | East | | South | East. | |
| 24 | | | 3.22 | | 106.10 | | | | |
| 25 | S 1/2 W | 48 | 4.8 | 4.16 | 106.23 | | | | |
| 26 | S 1/2 W | 24 | 4.38 | 4.48 | 106.13 | | | | |
| 27 | | | 5.24 | | 106.9 | | | | |
| 28 | | | 5.48 | | | | | | |
| 29 | | | | | | | | | |
| 30 | | | 6.15 | | 105.18 | | | | |
| 31 | | | | | | | | | |
| 1797 Jan 1. | | | 6.41 | | | | | | |
| 2 | N 1/2 W | 42 | 7.4 | | 104.32 | 104.32 | | | |

Prinie Master, from Banca towards Java Head.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|--|--|
| N.E. N. | All these 24 hours fine breeze & pleasant. At 5 P.M. saw Morquin Hill (near S.E. dist. 3 leagues) soundings from 7 to 8 fathoms. At noon Morquin Hill bore N. 48 E. dist. 6 leagues. wind N. 13 fath. |
| N.E. N.W. | Sent part of the crew on board, at 1 P.M. about of 4th Point, in ground with 13 fathoms had soundings in the straits from 6 to 18 fath. At noon Succorua bore N. 4 W. dist. 3 leagues. |
| N. Calms N.E. | Became moderate & pleasant, at 9 P.M. heavy thunder & sharp lightning, which continued all night, raining very hard, brought 3 casks of water current S.E. 1 knot. |
| N. Calms N.W. | Became moderate & cloudy, at sundown nearly calm, came too near the Sumatra shore. At 5 A.M. got underway with a small breeze. |
| W. S.W. N.W. Variable | Squally with light rain. At 3 1/2 P.M. about of the two Brothers. Soundings 10 to 26 fath. In the morning saw Isle Babec bearing S by N. |
| Variable & light airs all round the compass. | Moderate & pleasant, incline to calm, sounded 13 to 17 fath. Current S.W. 2 knots. At noon came too in 20 fath, heard bell on the bottom near 2 P.M. & her compass & the extremest showed the way from S 17 E to S 5 E. |
| Light air | Sent part riding at anchor about of Round Island, current still running at 5 got underway, but the anchor getting fast was obliged to come too again. |
| Calms S. by W. S.W. by S. | Light airs, nearly calm, current setting S.W. nearly 3 knots per hour. at anchor off the Kauris, at 2 P.M. springing up from the westward, made sail upon her ^{but it would only} for ^{hoist her} up with her anchor. The breeze springing up got underway, but the current was so strong that the vessel had |
| S to W variable | like to have been drifted ashore. Wind variable, beating in the straits of Sumatra. Violent squalls & heavy rain. |
| S to W. | Squally, rainy, disagreeable weather. beating out of Prinie's Island Straits, gained nothing this day. Heavy squalling into the straits. |
| W to S. N.W. | This day squally, rainy weather, beating in Prinie's Straits; at 5 P.M. the wind favored so that the ship lay up S.W. & N.W. by W. Prunick very much filled up our water. At 9 P.M. first point of the straits bore S.E. dist. 12 leagues. |

Nathl Bowditch's Journal, in the Ship Astrea, May

| Date. 1797 | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|-------------------------|-----------|-------|---------------|----------------|-----------------|-----------------|-------------|----------------------------|--------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| Jun ⁿ . 3 | S 25 W. | 114 | South 8.18 | South. 8.41 | East. 103.45 | East. 103.42 | South | East | 5 |
| 4 | S 34 W | 79 | 9.54 | 9.48 | 103.5 | 102.55 | | | |
| 5 | S 5 W | 27 | 10.13 | 10.17 | 102.51 | 102.42 | | | |
| 6 | S 81 W | 41 | 10.23 | 10.22 | 102.10 | 101.58 | | | |
| 7 | N 76 W | 72 | 10.5 | 9.59 | 100.59 | 100.44 | 10.10 | Ar. Ar. N. 101.2 | 1.44 |
| 8 | S 10 E | 38 | 10.35 | 10.36 | 101.11 | old 100.55 | | | |
| 9 | S 8 1/2 E | 69 | 11.29 | 11.23 | 101.55 | 101.48 | | | |
| 10 | S 4 W | 54 | 11.26 | 11.21 | 101.01 | 101.3 | | | |
| 11 | W 5 W. | 32 | 11.33 | 11.30 | 100.31 | 100.42 | | | |
| 12 | S 11 W | 60 | 12.28 | 12.38 | 100.89 | 100.39 | | | |
| 13 | S 70 W | 30 | 12.49 | 12.52 | 99.50 | 100.19 | D. 12.46 | Ar. Ar. N. R. M. 100.24 | 0.56 E |

Bravo Master, from Java Head towards The Isle of France.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|---|--|
| W by N. W. N. W. | Fresh breezes & squally, wind inclining to the S.W. & S. |
| W by N. W. by N. | First part fresh breeze, cloudy; latter, more moderate, light airs, pleasant. |
| N. W. to W. | Light wind & variable, clear. at 6 A.M. small shower. |
| S. E. to S. | Light airs, & pleasant. Sharks, Dolphins & around. |
| S by W S. W. by S. | Begins light airs & pleasant; latter part fresher breeze, pleasant. |
| S. W. S. W. by W. | Moderate breeze, pleasant, more from S. W. |
| S. W. by W. to S. W. by S. | Moderate gales & pleasant. |
| S. W. to S by W. | Moderate & pleasant. Since leaving the straits the wind has held so much to the southward, that we have found it very difficult to get into the latitude where the S. E. trade generally reigns. |
| S. W. & N. E. Variable. | Light wind & very variable. Current appears to Set Northwesterly ever since leaving the straits, as our lat by acc. & Obs. have well agreed with each other. |
| N. N. E. & N. E. E. by S. | Light breeze, & pleasant. |
| E. N. E. Variable South S. S. W. | Light breeze, calm, pleasant, cloudy, rain. Great numbers of Dolphins & around. |

Nathaniel Bowditch's Journal, in the Ship Alcees Henry Prince

| Date. 1797 | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|---------------|----------|-------|----------------|----------------|---------------|---------------|------------|-------------------|--------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| Jan 14 | S 86 W | 93 | South 12.59 | South 12.57 | East 98.15 | East 98.53 | South | West | 1.38 |
| 15 | S 81 W | 83 | 13.10 | 13.10 | 96.51 | 97.38 | | | |
| 16 | N 87 W | 44 | 13.8 | 12.56 | 96.6 | 97.2 | | | |
| 17 | S 22 W | 8 | 13.4 | 12.53 | 96.4 | 97.9 | | | |
| 18 | S 26 W | 37 | 13.26 | 13.19 | 95.48 | 97.2 | | | |
| 19 | S 42 W | 74 | 14.14 | 13.56 | 94.58 | 96.21 | 14.2 | Az. A.M. 13.47 | 2.38 |
| 20 | S 47 W | 99 | 15.4 | 14.45 | 93.44 | 95.16 | | | |
| 21 | S 62 W | 122 | 15.43 | 15.28 | 91.42 | 93.23 | | | |
| 22 | S 67 W | 132 | 16.20 | 16.4 | 89.35 | 91.25 | | | |
| 23 | S 67 W | 129 | 16.53 | 16.37 | 87.35 | 89.14 | | | |
| 24 | S 65 W | 125 | 17.30 | 17.20 | 85.33 | 86.50 | | | |

By observation of the stars

Master, from Java Head towards the Isle of France.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|-------------------|---|
| NE to SW | First part fine breeze, pleasant; at midnight more moderate; latter part pleasant breezes & fine. |
| SW S | Moderate gales & clear. |
| S. S. westerly | Light airs, inclining to calm, clear. |
| W by N E | Light airs, calm, clear. Success from S. |
| NNE E | Begins light breeze, but at noon freshens; clear. |
| E | Pleasant breeze, clear. |
| SE. | Moderate, pleasant. Fine breeze, clear. |
| SE by S | Fine breeze & clear, Great numbers of Bonites around, |
| SE | Fine breeze & clear, |
| E ESE | Fine breeze, fair. |
| E to ENE | Fine breeze & fair, excepting a small rain squall at 10 A.M. |

Nathan Bowditch's Journal, in the Ship Astrea, Henry

| Date. | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|--------|-----------|-------|-----------|-------|------------|-------|------------|-------|--------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| 1797 | | | | | | | | | |
| Jan 25 | S 67.30 W | 148 | 18.17 | 18.17 | 83.9 | 84.4 | | | |
| 26 | S 76 W | 143 | 19.18 | 19.21 | 80.53 | 81.26 | | | |
| 27 | S 76 W | 156 | 17.59 | 20.19 | 78.12 | 78.23 | | | |
| 28 | S 76 W | 164 | 20.44 | 20.46 | 76.24 | 76.14 | | | |
| 29 | S 76 W | 53 | 20.57 | 21.01 | 75.28 | 74.56 | | | |
| 30 | S 76 W | 95 | 21.25 | 21.36 | 73.47 | 72.53 | | | |
| 31 | S 82 W | 97 | 21.46 | 21.50 | 72.4 | 70.48 | | | |
| Feb 1 | S 82 W | 114 | 21.57 | 21.51 | 70.2 | 68.24 | | | |
| 2 | S 82 W | 79 | 22.3 | 22.0 | 68.37 | 66.39 | | | |
| 3 | S 71 W | 84 | 22.28 | 22.28 | 67.12 | 64.51 | | | |
| 4 | S 73 W | 98 | 22.57 | 22.57 | 65.31 | 63.47 | | | |

By observation of the sun

23

5

1

1

By last obs.

Az. A.M. West 3.20

A.M. Az. 6.57
Am. 6.3

P.M. Az. 10.26

Az. P.M. 9.29

Prince Master, from Java head towards the Isle of France,

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|----------------------------------|--|
| ENE | Rainy, squally weather, large sea, double reefed F & M. topsails & single reefed M. T. sail, &c. |
| ENE | All this day rainy squally weather, large sea, shipping much water on deck, at noon rather more moderate, under sail. |
| ENE to NE. | Fresh breeze, squally, rain, large sea, shipped considerable water on deck. Latter part more moderate. |
| NE to N. | Begins fine breeze & pleasant; middle, variable wind, rain; latter light breeze & pleasant. |
| variable N. E by N E by S. | Light breeze, variable; midnight small showers; latter part clear pleasant weather, fine breeze. |
| E. to E by S. | Moderate breeze & clear. |
| E. | Fine breeze & pleasant. |
| ESE | Fine breeze & clear. |
| E to ESE. | Begins fine breeze & pleasant; a. d. variable wind & small showers. Took several lunar observations within a few days. |
| ESE to ENE | Begins squally; middle, moderate, rain; latter, pleasant breeze, clear. |
| E by N to ESE | In general fine breeze & clear; sometimes a small shower. |

Math. Brudatohis

Journal, in the Ship Astrea, N Prince

| Date. 1797 | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|---------------|----------|-------|-----------------|-----------------|-------------|-------------|--------------------|---|--------------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| Accl. | | | <i>Lat. th.</i> | <i>Lat. th.</i> | <i>East</i> | <i>East</i> | <i>South</i> | <i>East</i> | <i>W.</i> |
| 5 | NbS | 86 | 23.14 | 23.17 | 64.0' | 62.53 | | | |
| 6 | NbS | 90 | 23.36 | 23.41 | 62.17 | 61.47 | Az. 23.36 | A.M. 62.3 | 11.8 |
| 7 | NbS | 92 | 23.59 | 23.58 | 60.38 | 60.45 | | | |
| 8 | S 76 W | 74 | 24.16 | 24.21 | 59.19 | 60.3 | Az. 24.21 24.15 | P.M. 60.35 A.M. 60.13 | 15.2 14.5 |
| 9 | S 70 W | 96 | 24.53 | 25.8 | 57.39 | 59.1 | | | |
| 10 | S 73 W | 86 | 25.33 | 25.43 | 56.8 | 57.30 | | | |
| 11 | S 73 W | 116 | 26.17 | 26.31 | 54.10 | 55.32 | | | |
| 12 | N 74 W | 38 | 26.14 | 26.19 | 53.30 | 54.53 | 26.30 | 072. A.M. 55.3 | 17.30 |
| 13 | N 71 W | 29 | 26.9 | 26.13 | 52.59 | 54.23 | 26.10 | At the same time by the moon when bearing was N 50 W. the day 20.27 | |
| 14 | S 70 W | 31 | 26.24 | 26.19 | 52.26 | 53.50 | 26.17 | Az. P.M. 53.22 | 18.56 |
| 15 | N 31 S | 55 | 26.47 | 27.5 | 51.33 | 52.58 | | Az. A.M. 53.58 | 18.10 |

Master, from Java Head

towards the Isle of France,

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|------------------------------|--|
| E. | Fine breeze & pleasant. |
| E. | Fine breeze & pleasant. |
| E | Fine breeze, pleasant. |
| E | Fine breeze, clear. |
| E to N. | Fine breeze & pleasant. Had a lunar observation, with the stars Regulus & Alderamin. |
| NE to E | Began moderate & clear; end with small showers. |
| NE to E | Began, moderate breeze & light rain; middle part especially with rain, saved sea & fresh water; latter part variable, light rain. |
| NE to ENE. calm WSW. | Began fine breeze & cloudy; middle, calm & clear, large sea, observed the variation by an azimuth of the moon. |
| W to SSW. | Light airs, inclined to a calm, clear. |
| E to S.E. ^{calm} | Began calm & clear, latter part light airs & cloudy, end with small showers. |
| E to S.E. | Began light airs & small rain; end with variable wind, found tide a ripple all day; at noon, found we were set 18 miles, latter southward. |

210

V. M. B. B. B.

Journal, in the Ship Astor, N. Prince

| Date. | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|--------|-----------|-------|-------------|----------------|------------|-----------|----------------|----------------|---------------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| 1797 | | | | | | | | | |
| Feb 16 | S 65 W | 54 | South 27.28 | South 27.36 | East 50.38 | East 52.4 | South | East | W. |
| 17 | S 70 W | 66 | 27.58 | 27.53 | 49.28 | 50.54 | | | |
| 18 | S 70 W | 115 | 28.32 | 28.20 | 47.26 | 48.53 | | | |
| 19 | S 67.30 W | 115 | 29.04 | 29.11 | 45.26 | 46.53 | | | |
| 20 | S 66 W | 104 | 29.53 | 29.52 29.47 | 43.37 | 45.05 | 29.23 29.40 | 46.23 45.35 | 25.06 26.9 |
| 21 | S 75 W | 132 | 30.76 | 30.92 | 41.09 | 42.38 | | | |
| 22 | S 75 W | 78 | 31.02 | 30.57 | 39.42 | 41.22 | | | |
| 23 | S 76 W | 140 | 31.31 | 31.26 | 37.03 | 38.54 | | | |
| 24 | S 76 W | 93 | 31.49 | 31.53 | 35.17 | 36.30 | 31.46 | 36.21 | 25.19 |
| 25 | S 78 W | 121 | 32.18 | 32.22 | 32.58 | 33.33 | 31.59 | 35.0 | 27.11 |
| 26 | S 80 W | 153 | 32.49 | 33.12 | 29.59 | 29.55 | 33.0 | 30.49 | 20.35 |

Master, from *the* *Isle of France* towards *the* *Cape of Good Hope*,

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|--|---|
| Very variable E. | Begins squally with rain, ends moderate & pleasant. Set 8' South by a current. |
| Variable SE & NE. | Moderate & pleasant, latter part cloudy, at 1 P.M. heavy thunder & light squalls to the N.W. Tide rips. |
| ENE to Ely S | Fine breeze & cloudy, latter part breeze cloudy, squally, rain, lightning. This day the ship sprung a leak, which continued steady till we arrived at Salen, being obliged to keep her men to the pumps constantly. |
| E. | Squally, rain, lightning. Tide rips. |
| E | Begins squally, but ends fine breeze & clear. Tide rips. |
| E. NE to N. | Fine breeze & pleasant. |
| N. variable to W & S.W.S. SSE | Pleasant, light winds. Ends brisk breeze & cloudy. |
| SE by E SE | Fine breeze, fair pleasant weather. |
| ESE to SE | Pleasant breezes & clear. No appearance of a current, |
| ESE to SE by E | Begins pleasant & clear, ends, squally with rain, |
| ESE to E. ENE NE | Excellent breeze, clear, Current set the ship 23' S. being in the Mozambique channel, |

Nathaniel Bauditch's Journal, in the Ship Astrea, Henry Prince.

| Date. 1797 | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|---------------|----------|-------|-----------|-------|------------|-------|----------------|-------------------------|----------------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| Feb 27 | S 74 W | 92 | 33.30 | 33.54 | 28.10 | 27.27 | 34.2 34.17 | 22.00 29.18 28.41 | 28.47 25.26 |
| 28 | S 86 W | 39 | 33.57 | 34.24 | 27.25 | 26.3 | | | |
| March 1 | N 11 W | 53 | 33.25 | 34.10 | 26.59 | 24.59 | | | |
| 2 | S 26 W | 25 | 34.33 | 34.56 | 26.46 | 24.8 | | | |
| 3 | S 87 W | 49 | 35.4 | 34.59 | 25.46 | 22.30 | | | |
| 4 | N 64 W | 44 | 34.43 | 34.42 | 24.58 | 21.51 | 35.3 34.53 | 22.00 22.00 22.1 | 26.31 24.49 |
| 5 | S 68 W | 88 | 35.15 | | 23.18 | 20.21 | | | |
| 6 | N 88 W | 108 | 35.12 | 35.22 | 21.6 | 18.10 | 35.22 | 22.00 18.48 | 22.30 |
| 7 | N 37 W | 50 | 34.42 | 34.49 | 20.30 | 17.52 | | | |
| 8 | N 60 W | 112 | 33.53 | 33.31 | 18.34 | 16.5 | 34.38 33.52 | 22.00 17.25 22.40 | 24.37 24.7 |
| 9 | N 65 W | 156 | 32.26 | 32.23 | 15.49 | 13.27 | | | |

Master, from The Ile of France towards the Cape of Good Hope,

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|----------------------------------|---|
| NE W. WSW NW W | Began fine breeze & clear; at 6 P.M. lightening to the W. at 11 ^{PM} wind came to the W. with rain; at 1 A.M. calm, large sea, vessel rolling much. at noon light breeze, swell abated. |
| NE SE. variable NE to E | Light wind variable, not much swell, no tide, rippler. Within two days, the fish that have been round us since leave "the strait" have left us, having fasted nearly 100 from 8 to 20 lb per piece. Those we first caught were of an excellent flavour, but having caught more than we could eat, we salted some of them, but it was found that after keeping them 2 or 3 days, they would cause the headache to any one who ate of them. At 9 A.M. made the land about Salazua Bay. Light wind & variable, current set S. 27 miles. |
| N to NE N by W to WNW | Began, light wind & pleasant; middle part, squally, rain, End with pleasant breeze & cloudy. Weather very cool. |
| W to SW by W | Began, light wind & pleasant; middle part, squally, rain, End with pleasant breeze & cloudy. Weather very cool. |
| SW to SSE E to NE. | Began moderate breeze & cloudy; middle, squally, large sea. At 10 P.M. water discoloured. In morning saw land bearing N by W. at a good distance, |
| E WSW W WS. | Moderate breeze & pleasant, swell abated. Tide rips, water discoloured. At 10 A.M. saw the land near Cape Vaecias. The current set as usual, if not strong. |
| WSW S by W SE. | Began moderate & pleasant; middle part calm, sounded 67 fath. grey sand mixed with small shells. In the morning the water not discoloured. |
| SE to ESE. SE to NE. | Began light breeze & pleasant, land in sight; end fine breeze small rain, water not discoloured. |
| NE to NW. N W to W | Fine breeze & pleasant. |
| WNW to WSW. SSW to SSE. | Wind variable, pleasant. Took a lunar observation, with the stars Aldebaran & Regulus. |
| SSE to SW. | Fine breeze & pleasant. |

Nath^l Bowditch's Journal, in the Ship Astrea, 16 Prince

| Date. | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|-------|----------|-------|-----------|-------|------------|-------|------------|-------|--------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| 1797 | | | | | | | | | |
| March | | | South | South | East | East | South | East | W. |
| 10 | N 67 W | 106 | 31.23 | 31.13 | 14.06 | 14.52 | | | |
| 11 | N 55 W | 134 | 29.55 | 29.46 | 12.0 | 9.54 | 30.56 | 11.7 | 22.23 |
| 12 | N 47 W | 157 | 28.3 | 28.18 | 9.45 | 7.37 | | | |
| 13 | N 46 W | 106 | 27.5 | 27.5 | 8.18 | 6.8 | | | |
| 14 | N 47 W | 63 | 26.21 | 26.21 | 7.27 | 5.14 | 26.35 | 5.28 | 18.18 |
| 15 | N 46 W | 76 | 25.26 | 25.30 | 6.28 | 4.13 | | | |
| 16 | N 47 W | 87 | 24.32 | 24.38 | 5.17 | 3.1 | 25.18 | 3.55 | 21.7 |
| 17 | N 47 W | 81 | 23.44 | 23.50 | 4.11 | 1.54 | | | |
| 18 | N 47 W | 95 | 22.46 | 22.39 | 3.55 | 1.37 | 23.3 | 1.41 | 17.20 |
| 19 | N 49 W | 111 | 21.26 | 21.26 | 2.55 | 0.36 | | | |
| 20 | N 51 W | 114 | 20.12 | 20.12 | 0.50 | 3.3 | | | |

By observation

By observation of the sun

11 7 19

By observation

Master, from *The Cape of Good Hope* towards *St. Helena*.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|---------------------|--|
| S to SW by W | Fine breeze & cloudy. |
| W to SW SW to S. | Fine breeze, pleasant, <i>fairy</i> . Latter part, fresh breeze, pleasant. |
| S to SE | Strong breeze, cloudy. |
| SE to SSE | Fine breeze, cloudy. |
| S to SE. | Pleasant breeze, cloudy. |
| SSE to SE | Moderate, pleasant: Pleasant breeze, cloudy. |
| SE | Pleasant breeze, clear, |
| SE S to SE | Pleasant breeze, clear; latter part cloudy. |
| SE. | Light breeze, cloudy. |
| SE by E to SE | Pleasant breeze, cloudy. |
| SE by E | Fine breeze, cloudy. |

Nathl^d Bowditch's

Journal, in the Ship Albatross, No. Prince

| Date. 1797 | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|---------------|----------|-------|-----------|-------|------------|---------------|------------------|-----------------------------------|----------------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| March | | | South | South | West | West | South | West | W |
| 21 | Asolte | 94 | 19.12 | 19.12 | 0.27 | 3.41 | . | | |
| 22 | N49W | 99 | 18.7 | 18.4 | 1.46 | * D x 5.25 | 19.0 18.24 | az P.M. 4.09 az A.M. 5.0 | 16.47 14.48 |
| 23 | N49W | 97 | 17.0 | 17.2 | 3.3 | * D x 6.40 | | | . |
| 24 | N48W | 116 | 15.44 | 15.41 | 4.33 | * D x 8.25 | az A.M. 16.7 | 8.5 | 11.56 |
| 25 | N59W | 110 | 14.41 | 14.37 | 6.11 | 16.18 | | | |
| 26 | N59W | 106 | 13.42 | 13.48 | 7.44 | 12.6 | az P.M. 14.27 | 10.45 | 14.24 |
| 27 | N58W | 119 | 12.45 | 12.44 | 9.28 | 14.5 | | | |
| 28 | N56W | 116 | 11.39 | 11.47 | 11.6 | 15.58 | az A.M. 12.4 | 15.30 | 11.8 |
| 29 | N56W | 105 | 10.48 | 10.57 | 12.35 | 17.42 | | | |
| 30 | N56W | 112 | 9.54 | 9.58 | 14.10 | 19.32 | az P.M. 10.43 | 18.10 | 11.30 |
| 31 | N51W | 115 | 8.53 | 8.54 | 15.33 | 21.11 | | | |

By observation of March 25 to April 2

Master, from *St. Helena* towards *Ascension*,

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|-----------------|---|
| SE by E | Fine breeze, cloudy. middle part with rain; latter part, cloudy. |
| SE by E | Fine breeze & clear. |
| SE by S. | Fine breeze & clear. |
| SE by S. | Fine breeze, light clouds; at times rain. |
| SE SE to ESE | Fine breeze, clear; latter part cloudy. |
| SE to ESE | Fine breeze & clear; in general pleasant but sometimes cloudy with light rain. |
| SE to SE | Same as yesterday. |
| SE. | Fine breeze & clear weather |
| SE to ESE | Ditto. |
| SE | Ditto, |
| SE to ENE | First part, fine breeze & clear; middle part, cloudy, large sea, latter part moderate & hazy. |

Math^{rs} Boarded

Journal, in the Ship Astrea, 16 Prince

| Date. 1797 | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|---------------|----------|-------|-----------|-------|------------|--------|--------------------------|-------------------|----------------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| April | | | South, | South | West | West | South | West | |
| 1 | N 53 W | 60 | 8. 9 | 8. 12 | 16. 57 | 22. 47 | 8. 25 By Planet Venus | 22. 13 am A.M. | 7. 17 8. 37 |
| 2 | N 53 W | 87 | 7. 20 | 7. 26 | 17. 44 | 23. 52 | | | |
| 3 | N 63 W | 100 | 6. 41 | 6. 43 | 19. 13 | 25. 37 | | | |
| 4 | N 63 W | 89 | 6. 2 | 6. 1 | 20. 33 | 27. 04 | 6. 10 | 26. 37 | 5. 46 |
| 5 | N 52 W | 71 | 5. 17 | 5. 15 | 21. 29 | 27. 38 | 5. 51 | 27. 12 | 6. 33 |
| | | | | | | | 5. 26 | 27. 30 | 5. 45 |
| 6 | N 53 W | 93 | 4. 26 | 4. 36 | 22. 41 | 28. 51 | | | |
| 7 | N 50 W | 99 | 3. 32 | 3. 32 | 23. 57 | 30. 8 | | | |
| 8 | N 50 W | 80 | 2. 41 | | 24. 59 | 31. 22 | | | |
| 9 | N 43 W | 23 | 2. 26 | 2. 20 | 25. 15 | 31. 50 | | | |
| 10 | N 71 W | 44 | 2. 10 | | 25. 58 | 32. 45 | 2. 8 | 32. 4 | 2. 45 |
| 11 | N 35 W | 28 | 1. 48 | 1. 48 | 26. 14 | 33. 26 | 2. 2 | 32. 40 | 2. 19 |

amp. P.M.
By Drawing the bearing of a
rumbur in the morning
1. 56 26. 10 2. 15

Master, from *Ascension*towards *the Equator*,

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|-------------------------|---|
| SE SE to NE SE | Moderate & pleasant. |
| SE | Fine breeze & pleasant. |
| SE | First & middle part pleasant breeze, & clear, latter part squally. |
| SE | Squally with rain. At 5 P.M. took in shadder sails, for the first time for 28 days. Took two lunar observations. |
| SE to NE | Raining, squally weather, not blowing heavy in the squalls. Took two lunar observations. |
| SE to ENE | Pleasant breeze, cloudy; at times a little rain. |
| SE | First & middle part, fine breeze; at times, squally; latter, calm, rain. |
| SE E to N. Calm | Variable winds & weather, rain, calm &c, caught 2 hogs heads of water, large swell from N.E. Tide up. |
| NE to N. Calm SE | Variable wind, calm, swell from N.E. Ship seems to have been set to the northward by a current. |
| SE to E Calm N.W. | Variable winds & weather, large swell from N.E. tide up. Rain. |
| N.W. N NE | Variable winds & weather, sometimes calm, rain. |

Nathl^r Bowditch'sJournal, in the Ship Astrea, N^o Prince

| Date. 1797 | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|---------------|----------|-------|---------------|---------------|---------------|---------------|--|---------------|--------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| April | | | | | | | | | |
| 12 | N 34 W | 60 | South 0.58 | South 1.19 | West 26.48 | West 34.25 | North | West | |
| 13 | N 47 W | 66 | 0.20 | 0.31 | 27.33 | 35.35 | | | |
| 14 | N 35 W | 106 | North 1.8 | North | 28.33 | * 0 * 37.0 | | | |
| 15 | N 51 W | 120 | 2.24 | 2.1 | 29.46 | 38.5 | Az. 1.40 Amv. 37.49 Mag Planet Regulus 1.03 Mag Planet Venus 1.02 | West 01.35 | |
| 16 | N 56 W | 115 | 3.05 | 3.02 | 31.32 | 39.43 | | | |
| 17 | N 36 W | 117 | 4.7 | 3.57 | 33.9 | 41.11 | Az. 3.16 Amv. 40.7 Mag Planet Regulus 0.31 Mag Planet Venus 0.41 | West 0.31 | |
| 18 | N 51 W | 113 | 5.9 | 5.8 | 34.36 | 42.29 | Amp. 4.5 Amv. 41.31 Mag Planet Regulus 0.458 Mag Planet Venus 0.418 | West 0.458 | |
| 19 | N 36 W | 111 | 6.38 | 6.43 | 35.41 | 43.48 | | | |
| 20 | NW | 132 | 8.17 | 8.16 | 37.15 | 45.36 | | | |
| 21 | N 40 W | 133 | 9.59 | 10.7 | 38.39 | 47.13 | Amp. 9.39 Amv. 36.49 | West 0.218 | |
| 22 | NW | 132 | 11.40 | 11.36 | 40.12 | 49.0 | | | |

Master, from the Equator towards the West Indies.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|--------------------------------------|--|
| SE to ENE. NEB | Light breeze & variable, with small rain. True latitude by Ace. & Obs. differ 21'. |
| SE to ENE. | Raining squally weather, wind variable. |
| ENE to NE. variable from NE to SE | Ditto, Had 2 lunar Observations. |
| NE. | Fine breeze, at times squally; ends with a fresh breeze & cloudy. |
| NE by N | Fine breeze & cloudy. |
| NNE | Fine breeze & pleasant, great tide rip. |
| NE by N | Fine breeze & clear, great tide rip. |
| NE to NE by E. | Fine breeze & pleasant weather. |
| NE | Fine breeze & pleasant weather. Had two lunar observations |
| NE | Fine breeze, light squalls, rain. |
| NE to SE | Strong breeze & squally with rain. |

Arthur Booditch's Journal, in the Ship Africa, 16. Prince

| Date. | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|-------|----------|-------|-----------|-------|------------|-------|------------|-------|---------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| 1797 | | | | | | | | | |
| April | | | North | North | West | West | North | West | W. |
| 23 | N40W | 134 | 13.20 | 13.17 | 41.39 | 50.41 | 12.52 | 50.0 | 0.43E |
| 24 | N34W | 95 | 14.36 | 14.36 | 42.32 | 51.48 | | | |
| 25 | N56W | 75 | 15.18 | 15.15 | 43.56 | 53.4 | 15.5 | 53.0 | E. 0.31 |
| 26 | NW | 76 | 16.9 | 16.2 | 44.30 | 54.14 | | | |
| 27 | N31W | 74 | 17.6 | 16.58 | 45.10 | 55.9 | 16.16 | 55.22 | 1.2W |
| | | | | | | | 16.40 | 55.47 | 1.17E |
| 28 | NNW | 92 | 18.23 | 18.28 | 45.47 | 56.0 | | | |
| 29 | N41W | 68 | 19.35 | 19.34 | 46.1 | 56.28 | 18.45 | 56.7 | 0.38W |
| | | | | | | | 19.15 | 56.21 | 0.32E |
| 30 | N17W | 55 | 20.27 | 20.34 | 46.18 | 56.59 | | | |
| May | | | | | | | | | |
| 1 | N42W | 41 | 21.5 | 21.5 | 46.47 | 57.42 | 20.57 | 57.31 | 1.5E |
| 2 | N58W | 60 | 21.37 | 21.34 | 47.42 | 58.52 | | | |
| 3 | N39W | 59 | 22.20 | 22.25 | 48.22 | 59.22 | 21.42 | 59.0 | 1.28W |
| | | | | | | | 22.10 | 59.14 | 1.37W |

Master, from the Equator towards the West Indies.

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|---------------------|---|
| E to NE NE E. | First part fresh gales & squally, middle & latter part fine breeze & cloudy. |
| E to NE | Pleasant breeze & fair, |
| NE to NNW | Moderate & fair, |
| NNW to NE. | All this day moderate & pleasant; middle part, small shower, this day passed a number of bunches of Gulf weed, being the first we have seen this passage. |
| N by N to ENE. | Moderate & pleasant. At 10 P.M. observed the altitude of the Polar Star, which makes the latitude 16.32 N. The latitude by the log being 15.37 N. |
| E to ENE | Fine breeze & pleasant, |
| ENE | Fine breeze & pleasant. Spoke with the Sloop Rosetta of Savannah out 26 days bound for St Cruz |
| E to NE & E | Variable weather, unrefreshed squally, |
| E by N to NNW. | Light breeze & variable Took two lunar observations. |
| N by E to NE by E | Moderate & pleasant, wind inclining to the northward. Had two lunar observations. { At 7 1/2 P.M. Lat. by Pol. Star 21.15 By the log at the same time 20.22 |
| NE to NNW | Moderate & pleasant, Had two lunar observations. |

Nathl. Bowditch's Journal, in the Ship Astrea, No. Prince

| Date. 1797 | Courses. | Dist. | Latitude. | | Longitude. | | Variation. | | |
|---------------|----------|-------|-----------|-------|------------|-------|------------|-------|--------|
| | | | Acc. | Obs. | Acc. | Obs. | Lat. | Long. | Varia. |
| May | | | South | North | West | West | North | West | W. |
| 4 | N43W | 65 | 23.07 | 23.07 | 49.9 | 60.23 | | | |
| 5 | N37W | 38 | 23.37 | 23.35 | 49.33 | 60.44 | | | |
| 6 | N | 6 | 23.41 | 23.41 | 49.33 | 60.51 | | | |
| 7 | N7W | 44 | 24.25 | 24.16 | 49.39 | 60.44 | | | |
| 8 | N | 65 | 25.21 | 25.27 | 49.39 | 60.53 | | | |
| 9 | N | 98 | 26.57 | 27.5 | 49.39 | 60.53 | | | |
| 10 | N2W | 52 | 27.49 | 27.53 | 49.41 | 60.56 | | | |
| 11 | N36W | 108 | 29.20 | 29.14 | 50.52 | 62.7 | | | |
| 12 | N24W | 118 | 31.2 | 30.59 | 51.17 | 63.3 | | | |
| 13 | N37W | 119 | 32.34 | 32.45 | 53.13 | 64.30 | | | |
| 14 | NNW | 132 | 34.47 | 34.45 | 54.14 | 65.31 | | | |

Master, from *Manilla* towards *Salem*,

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|------------------------------|--|
| NE to NNE | Light breeze & pleasant. At 3 A.M. Latitude by the Star Star 22.56 N. Latitude by the Log at the same time 22.54 N. |
| NNE to NNE | Light winds, very clear, pleasant weather. |
| Calm S to SE | Calmish clear weather. |
| Calm NNE to NE E to SE | First part calm; middle & latter part moderate & fair. Took two lunar observations. |
| E to SSE | Moderate & fair. Took two lunar observations. |
| S. SSE to SW | First part, fair & pleasant breeze; middle, cloudy, rainy; Latter pleasant breeze & fair weather. |
| S. to W. SSE to NE | Variable winds & weather. middle part rain, thunder & lightning. first & middle part cloudy. |
| NNE to NNE | Became moderate, ends fine breeze & cloudy. |
| ENE to SE S by S | Fine breeze & cloudy. |
| SSE to SW | Fine breeze & cloudy, sometimes rain. |
| WSW. | Fine breeze & cloudy. |

Master, from *Bermudas*towards *Salem*,

| Winds. | Weather, Currents, Bearings of the Land, and Remarkable Occurrences. |
|--|---|
| WSW to W by N | All these unknown winds & weather variable, with thunder lightning, & rain, disagreeable weather. People refused to |
| WNW to N, variable | Light winds, pleasant weather. At about 1 P.M. began a very great tide rise which continued all day, suppose it to be the gulf stream. |
| NE & all round the compass, At 10 A.M. Thunder, lightning & rain, NNE. | Foul & muddy, very squally. At 2 A.M. steady breeze from the N. |
| NE to E | Fine breeze, clear & cool, |
| E to S. & SW, W to NE | Pleasant breeze & clear, at midnight the wind hauled to the westward, & blew fresh, just before noon there was so thick a vapor to the southward, that we did not expect to get the sun by the southern horizon, with the sextant. Observed the meridian altitude to |
| N to NE. | the northward 110.11 which made the lat. 40.21 N. Moderate breeze & very cold weather. |
| E to SE, SW, W, N. | Came on pleasant breeze & cloudy, and calm & foggy, just at noon it cleared away & we saw Race Point, bearing 116.2 N. dist 4 leagues, consequently the longitude of the Ship at noon, was 69.58 W. which differs only 10' from our lunar obs. of May 18. but differs 11.38 |
| NE All round the compass. | from our reckoning, At 2 P.M. came too in Salem Harbours. |
| | |
| | |
| | |

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Nathaniel Bowditch's Journal.

Remarks at Lisbon

When we made the land, we were nearly mid-way between Cape Roque and Cape Spichel, the latter Cape being easily known, as it is high and very flat on the top, with a long ridge on it looking like an old wall. We were 36 hours beating to windward before we got sufficiently under the northern shore; having taken, in the mean while, a pilot from a fishing boat, there being generally great numbers of them off this place; the pilotage to Belen Castle was 8 dollars; from thence to Lisbon 2 dollars; ~~the~~ outward pilotage being 6 dollars. We sailed through the northern channel, and came to anchor off Belen Castle; after coming to anchor, Capt Prince went to the castle, to report the ship, but was not suffered to land before the health Officers had visited. The same evening, we had permission ^{from them} to land next morning; when we were entered at the custom house by the Vice-Consul; and a new pilot put on board to carry the ship to and from Lisbon; ~~she~~ was not carried up among the other shipping, as we had no goods to land. — All your powder (if you have any on board) is taken out at an expense of 6 or 8 dollars; so that it is better to throw it over-board than to report it, if you have only a small quantity, not only on account of the expense, but the detention, as you are not permitted to make an entry at Lisbon, before a certificate is returned of your powder being in the custody of the keeper of the Castle Belen; this caused a difficulty with our ship, so that she was not entered at Lisbon, till the third day after her arrival.

All goods imported, or exported, must pass through the Custom-House, which is a very large building; the India-House being near to it, & of the same size. The Custom-House is supposed to be as large as any in Europe, and is well finished. The Exchange adjoins the Custom-House, and is not so large as I expected to have found it; the vaulted roof makes such a continual echo, that you cannot understand a person a few steps from you, though it does not incommode any persons near to each other.

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Nathaniel Bowditch's Journal, in the Ship
At Lisbon

The great number of excise officers, &c. make the port charges considerable. The "light money" is 25 cents per ton, on vessels not taking produce, and $5\frac{1}{2}$ cents on those that load with wines & other Portuguese produce.

The streets of Lisbon are very dirty, all their filth being emptied into them, and the passenger must take care not to have a tub of suds, or something worse, thrown upon him.

About 120 days in the year are set apart for the worship of their saints; on these days, and on Sundays, the custom house is not opened, and of course not much business is done. The streets are always infested with beggars of various denominations, some lazy drowsy friars, others real objects of charity; their importunate manner of demanding alms is really a very great nuisance.

While at Lisbon, I observed the variation of the compass, on board the ship, in the latitude of $38^{\circ}41'N$. On the 27th April 1796, Castle Belen bearing per compass $N. 77.5 W$. And a Palace in an elevated situation on the North Shore $N 22.30 W$. The variation being then $19^{\circ} 21 W$.

The tide runs very strongly in the river Tagus. On May 5. 1796. I observed the time of low water $7^h 15^m A.M.$ The moon being on the meridian at $10^h 26' A.M.$ daily difference of coming to the meridian $42'$. Whence, by allowing the time of high-water to be $6^h 12'$ later than the time of low-water, the time of high water was at $1^h 27^m P.M.$ which is $3^h 1^m$ past the time of the moon's setting. But as the river Tagus runs with considerable rapidity, it is probable that the ebb continues longer than the flood, & of consequence, this time ought to be decreased a little; perhaps it would not err much from the truth, to say that on the full & change days it is high water at $2^h 30^m P.M.$

At Madeira

The trade of the Americans to the Island of Madeira has been very great for 2 or 3 years past (from 1790). in the year 1795 there were shipped 7000 pipes of wine, in American vessels, which is nearly half the quantity exported from the Island.

The variation of the needle at Madeira, (Funchal road)
 " was observed in 1708, by Mons. Cottogon $4^{\circ}.0' W.$ In 1720 by
 " Father Larch $8^{\circ}.15' W.$ In 1758 by Thomas Rowe $15^{\circ}.12' W.$ In 1761
 " by Robert Bishop $16.00 W.$ In 1769 by Mons. de Fleurieu $15^{\circ}.0' W.$
 " In the same year, on board the British Ship *Lovershaffer* $16.30.$
 " In 1700 by W. Johnson $10^{\circ}.0' W.$ " I made several observations
 between May 16th & 19th ^{1796.} but they differed considerably, by a
 morning azimuth, in Funchal road, in the latitude of $32^{\circ}.34' N.$
 the variation was $20^{\circ}.26' W.$ The observation of May 19th gave only
 $16^{\circ}.59' W.$ In the evening after leaving Funchal, being in the
 latitude of $32^{\circ}.12'$, & $0^{\circ}.5' W.$ of Funchal, the variation was $21^{\circ}.21' W.$

May 15. 1796. I observed at noon in the latitude of $32^{\circ}.50' N.$
 at which time the middle of the Island of Porto Santo was
 $7\frac{5}{10}$ miles South of the ship, & $1\frac{6}{10}$ miles of long. W. as I found by
 observing the bearings of the land, at the extremities of an
 assumed base line; hence the latitude of the middle of Porto
 Santo is in the latitude of $32^{\circ}.57\frac{1}{2}'$. Which agrees with
 Moore, who places it in $32^{\circ}.58' N.$ In the requisite tables it is
 printed 32.584 ; but in a new chart published in the collection
 of Laurence Whittle, in May 1774, said to be copied from the
 Spanish surveys taken by Don. J. Lopes, deduced from the
 observations of the Chevalier Fleurieu, the latitude is put
 down $33^{\circ}.10' N.$ differing $19\frac{1}{2}$ miles, from what we have above
 determined it.

Memoir on the Latitude and Longitude of the
Island of Trinidad.

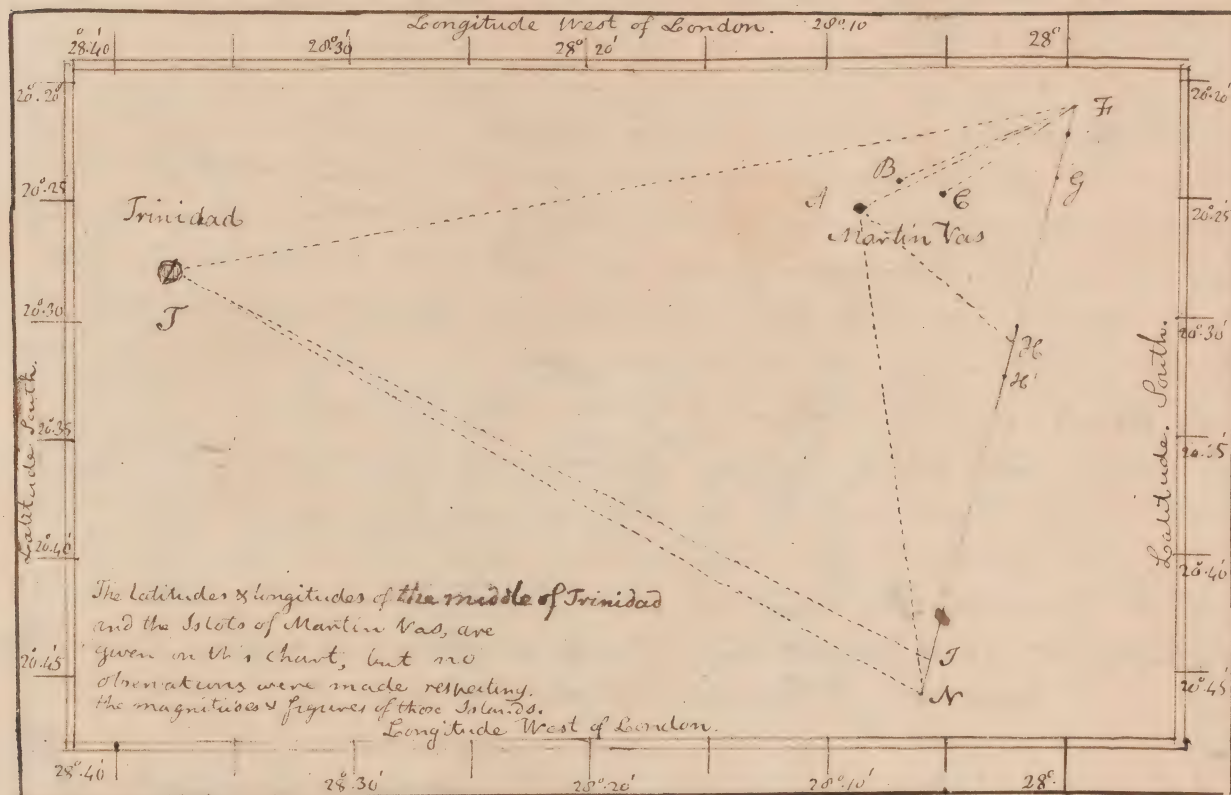
July 1. 1796, at day break we discovered the Island of Trinidad; which, by the means of several good lunar observations, we made in the longitude of 28.39° W. which is nearly 2° less than in Morre's Epitome, and in other books and charts we had aboard; this great difference induced us to take other observations while in sight of the land, all of which agreeing very well with each other, left no doubt of their accuracy.

The result of the several observations taken near Trinidad, is given in the adjacent table, which makes the longitude at noon 28.6° W. by our Trigonometrical operations (mentioned in next page) it was found that the Island of Trinidad was $33'$ W. of the ship at noon, consequently the long. of the Island is 28.39° W. Morre places it in 30.30° W.

| | | Long. of Ship at noon July 1. 1796. |
|---|--|--|
| By Obs. 00 June 27. brought on by the log | | 28.42° W. |
| Do. 00 June 27 ... 2° - - - | | 27.59 |
| Do. 00 June 29 ... 0° - - - | | 28.12 |
| Do. 00 June 30 ... 2° - - - | | 27.44 |
| Do. 00 July 1. in sight of Trinidad | | 28.01 |
| Mean, gives the longitude of the ship, at noon July 1. 1796 - | | 28.6° W. |

To determine the latitude of the ship at noon, we had two different observations, one of the Moon, the other of the Sun. The moon came to the meridian at $8^h.31^m$ A.M. when the alt. of her lower limb was $54^{\circ}.44'$, the correction for semidiameter was $+16.37$, Dip, $-4.3''$; D's horizontal parallax $60.13''$, consequently her parallax in alt. less refraction = $33'.56''$, hence her correct central altitude $55.30\frac{1}{2}'$, her declination being then $14^{\circ}.1'.30''$ N, consequently the latitude was $20^{\circ}.28' S.$ at this time we were nearly in the parallel of Trinidad. By bringing this lat. on by the log, I found that it made the latitude of the ship at noon 20.45° S. differing only $1'$ from the sun's meridian observation. For, the observed ^{meridian} alt. of the sun's lower limb was $45.59'$, corr. for Diam, Dip & Refract was $+11'$, the declination was 23.4° N. consequently the latitude of the ship 20.46° S. And as the Island ^{Trinidad} was then $10'$ N. of the ship (by our survey) its latitude must be 20.28° S.

In the morning in the latitude of 20.22° S. observed the variation by two sets of observations (being then about 12 leagues E. of Trinidad) the mean of both made the variation 2.36° W.



Observations taken for constructing this chart

From the first making of the land till noon, the ship was sailing upon a wind, S by W per compass, with a point leeward, making S by W 2 W per compass, which is the direction of the line S G H I N. At 6^h. 53'. 43" A. M. apparent time the ship was at F; at 7^h. 20'. 52" at G; at 8^h. 59' at H, at 11^h. 43'. 24" at I, and at Noon at N. The distances sailed by the ship during these times were measured by the log; which give the lengths of the lines FG, GH, HI, and at each of those places the bearing of the Island of Trinidad & the ^{three} Islets of Martin Vas were observed; and from hence the bearing and distance of each of them from the ship ^{at noon} was obtained; consequently by knowing the latitude & longitude of the ship at that time, we obtained the latitude & longitude of each of those places, the following is the result of several calculations.

| Trinidad | Latitude | Longitude |
|---------------------------------|-----------|----------------------|
| | 20. 28 S. | 28. 39 W. of London. |
| Islet of Martin Vas greatest A. | 20. 25½ | 28. 0. |
| Do — smaller B. | 20. 24 | 28. 7 |
| Do — C. | 20. 25 | 28. 5 |

Since the above observations were made, & published on the American edition of Moore's Epitome, I have seen the observations of La Perouse on this place, which agree nearly with the above.

Nathaniel Bowditch's Harbour Journal

Monday Oct 3. 1797 Being in Manila Bay, a boat came on board from John Stuart Kerr, who calls himself an American, saying he was born at Philadelphia; at 2 P.M. the government boat came aboard with two revenue officers, at 6 P.M. came to anchor in Cavite; next day weighed anchor & went farther up the river, and came to anchor in 2 fathoms mud bottom, the outer point of Cavite bearing N.E. & the large church of Cavite N.W. $\frac{1}{2}$ N. All the shipping were at anchor at Cavite, as it was about the breaking up of the monsoon, it not being customary to anchor off the bar of Manila, till November, when the N.E. monsoon is well set in; Cavite is about 3 leagues from Manila, the passage boats are passing between these places daily, but they are very inconvenient. Next day we went in the ship's boat to Manila; on our landing at the Custom House we met Mr. Kerr, who accompanied us, as Interpreter, to the house of the Governor. This visit must be made immediately after you come ashore; Mr. Kerr brought himself into a difficulty, a year or two after, by carrying an American to his own house, before he had made this visit.

(After waiting on the Governor, we went to Mr. Kerr's house (who at present is the American Consul) and hired one end of it, which was very convenient for shipping goods, as the river ran at the back of it, where the boats could come, & load with merchandises; contracts were made with some Chinese Men for sugars, to be delivered in 5 or 6 weeks, as they could not take it from the pots, dry it, & put it in bales, in less time; some that happened to be ready packed, was purchased & sent aboard immediately. The price we gave was from 5 $\frac{1}{2}$ to 6 dollars, per pound for the first kind. To some of the Chinese we advanced one third of the purchase money, but that was not generally the case. Most of the bags must be examined, by the sound, or else they will apt to turn you off with dark & wet sugar. All goods are weighed by the steelyard, divided into arrobes & pounds, as at Cadix, the weights here being the same as at Cadix. They make but very little use of molasses, as the Government does not allow of any distilleries, nor will it suffer any spirit to be distilled from the cane, or any to be imported; of course we were forced to call some New England Rum (belonging to the mate) by the name of Brandy or "Aqua diente"; and the natives were so ignorant of the quality, that they absolutely took it, in preference to the best Cognac Brandy, which was offered at the same price.

The price of Indigo, when we arrived at Manila in 1796, was from

at Manila in 1797.

85 to 86 dollars per quintal of 100 Spanish pounds (equal to 103½ lb. American), but as the English Ships &c. had nearly completed their loading, and being now purchasing but ourselves, we were able to procure at a less price, or at about 75 or 76 dollars per quintal. Nearly all the Indigo ^{was} purchased of the Natives in parcels from 3 or 4 lb. to several quintals, it ^{was} brought to the house in bags like those in which sugar is packed, these it ^{was} emptied in a large tub & inspected. Mr. Kerr assisted in inspecting most of the time; but in a short time we learned to inspect it ourselves, that which is light, when broken, free from flaws, & of an uniform clear colour is the best; if a few pieces were found of an inferior quality we made them deduct several dollars from the price; but mixed it in with the rest; if a large quantity of it was inferior, it was turned aside as second or third quality. They are very apt to wet their indigo just before offering it for sale, which will increase the weight as much as 10 or 12 per cent; to discover whether it is wet, it must be broken, & the piece struck with the edge of your nail, if it leaves a clear copper colour, without rising up at the side of the mark, as if soft, it is probably dry; if a wet piece be squeezed hard in your hand, it will appear cold & damp, even when the outside appears dry; for when they wet it, they take care that the outside of the Indigo shall appear quite dry, by exposing it a moment in the sun. After the Indigo was purchased we packed it in boxes, containing about 100 lb; the Spaniards generally pack theirs in Surrones; Mr. Kerr informed that the Indigo had not been purchased at less than 65 dollars for many years before; when we were there in 1800, we purchased considerable of good Indigo for that price, much better weight is obtained in purchasing Indigo in January & February, as the season is then so dry, that it is impossible for them to keep it in the damp state they could wish when selling it. The annual produce of the Colony in 1797, according to the information received from Mr. Kerr, was about 4500 tons of sugar & 400 or 500 tons of Indigo. Pepper is brought from Borneo & other places in Prins.

Manilla is the only free port in the Colony; the duties on imports and exports are small; all goods ^{imported} are carried into the custom ^{house} & appraised, and a duty of 6 per cent charged on them; dollars are imported free of duty, but pay 3 percent on exporting. It is best to enter all your cargo for exportation, otherwise you will be forced to pay the

Nathaniel Bowditch's Journals at Manila

duties upon reshipping them; Sugar, Indigo &c are exported free of duty. — The 4 pistole gold pieces of Spain, which we estimate at about 15 $\frac{1}{3}$ dollars, pass in Manila for 16 dollars, although the Chinese are averse to taking them for more than 14 $\frac{1}{2}$ dollars; but the Governor issued a proclamation, annexing a severe penalty to the refusal of accepting them at 16 dollars.

They keep their accounts at Manila in Grains, Rials, & Dollars.

12 Grains make 1 Real

8 Rials 1 Dollar.

Their weights are, pounds, catties, arabes, peculs, &c.

25 lb make 1 Arabe.

4 Arabes 1 quintal equal to 103 $\frac{1}{2}$ lb. American.

5 $\frac{1}{2}$ Arabes or 137 $\frac{1}{2}$ lb Spanish or 142 lb American make 1 pecul.

10 Ounces 1 Tale of Gold.

11 Ounces 1 Tale of Silk.

9 Ounces 1 Panto of Gold.

22 Ounces 1 Catty.

100 Cattles 1 pecul.

Each of these ounces being equal to 1 $\frac{3}{100}$ ounce avoirdupois, which is the weight of 1 Spanish milled dollar.

Fresh provisions are cheap at Manila, Fresh Beef 2 cents per lb. White flour bread about the same as in America in times of peace; Rice 2 dollars per pecul (which was reckoned dear). Flour 4 dollars per pecul. In the year 1800, all these articles were much higher, owing to the great number of troops.

We purchased a number of tanned hides, to put under the sugar to preserve it, they cost 6 rials per piece; but would not fetch the price sold in America.

Iron will generally pay a small freight to Manila, the Wine & Brandy we carried out in 1797 did not net the first cost, in the year 1800 it would have netted 400 per cent; a small quantity stocks that market. Those who carry Wine or Brandy, would do well to put it up in small casks of 17 or 18 gallons, it being much more saleable in casks of that size; the cheapest wines are as good for the Manila market, as the best of London particularly, procured at Madeira; we had Lisbon Wine, and Madeira

on the Ship Astrea.

suitable for the London Market, the former would have sold for 50 percent more than the latter; whereas the cost of the former was not two thirds of that of the latter, - A few wooden compasses which I bought of King, for 2 dollars per piece, were sold in Manilla for 8 dollars, 2 or 300 would have sold at the same rate, as they were wanted for the gun boats, - Tin plates, Lead & Copper, will generally pay a freight. A large quantity of old iron of all sorts and sizes ^(procured from the ruins of Cape St. Francis.) was sold here at an immense profit, being imported in a vessel belonging to Clarke & Nightingale of Providence.

The city of Manilla is about 3 or 4 miles in circumference, is walled all round; and ^{are} Cannon placed at proper intervals, but we were unable to get much information with respect to the state of the place, as they were shy of giving any information to foreigners. The buildings within the walls are all of stone, and none except the churches are more than 2 stories high, on account of the violent earthquakes which they have generally at the breaking up of the Monsoon, the month of March is when they most expect them; but on the 5th of Nov. 1797, we experienced several violent shocks at about 2 P.M. which came from the Northward & proceeded in a Southerly direction, continuing with violence, nearly two minutes; it threw down a large house $\frac{1}{2}$ a league from the city, untiled several buildings, & did much other damage; it was not observed on board the ships lying off the bar. The motion of this earthquake was quicker than those usual in America, as the latter are generally preceded by a rumbling noise, the former was not.

The suburbs of Manilla are very extensive, most of the business is done there; the houses of the wealthier class, are of two stories, built of stone; the poorer sort, live in Bamboo houses with thatched roofs; no house can be built in the suburbs without the particular permission of the Governor, in which the dimensions of the building are stated; fearing, if they were too high, that an enemy might make use of them for attacking the City; as was the case when the English took the place formerly; for one of the churches, near the walls, was very serviceable to them; it has since been pulled down.

There are but few Europeans in this settlement; all the women have a little of the Indian blood in their veins, excepting the Lady of the Governor & two or three others, though by successive intermarriages with Europeans they have obtained a fair complexion. The natives (like all other Malays) are excessively fond of gaming & cock-fighting; a Theatre is established for the latter business, from which the Government draws an immense revenue, this diversion ^{being} prohibited at any other place. Sometimes there are 5000 or 6000 spectators, each of which pays half a real. A large sum arises from the duties on Tobacco & Coco Nuts. Tobacco is prohibited, but if you smuggle any on shore, it cannot be sold for more than the cost in America, notwithstanding the retail price is very high; particular people, licensed by the King, are ~~the only~~ persons allowed to deal in it. — All the natives chew areca & betel, tho' not mixed with opium as in Batavia. This, with chewing & smoking Tobacco, makes their teeth very black. The segars used by the women, and with which they smoke all day, are made as large as they can possibly get into their mouths.)

The natives are about as honest as their neighbours the Chinese; they stole several things from us, but by the good nets of the police, we recovered most of them. On the 2^d. Dec. 1797, they broke into the house where we lived; entered the chamber where Capt. Prince & myself were asleep, and carried off a bag containing 1000 dollars, without awaking either of us, or any of the crew of the long boat, sleeping in the adjoining chamber. The guard ^{heard} discovered them as they were escaping, pursued them; they, in endeavouring to escape, ran aboard of a large boat, which, upsetting them, the money went to the bottom, and what was worse the bag burst, & the money was all scattered in the mud, where the water was 8 feet deep; however, by the honesty of the Captain of the guard most of it was recovered; the thieves were caught, and when we were there in 1800, Mr. Kerr informed us that they had been whipped & were to be kept in servitude several years.

The same day another robbery was committed, equally as daring. The day the Indigo was shipped, the second ^{mate} came ashore with several of the people to see it safe aboard; the boats we had provided not taking all of it, we sent the remainder aboard with a black fellow to guard, who was esteemed by Mr. Kerr as an honest fellow; but ^{he} had been contriving to steal a couple of boxes. When the Vasco, containing the Indigo, had hoisted the bow, a small boat came aboard with two boxes, filled with chips, stones, &c, appearing

in every respect, exactly like those full of Indigo; and pretending that we had put on board two wrong boxes, they exchanged their boxes for two real boxes of indigo, but in bringing them ashore they were detected, and the Indigo returned.

There are great numbers of Chinese at Manila, but they are all obliged to become Catholics. It is from them that most of the sugar is purchased. They trade considerably with China, their junk's arrive at Manila, and Samarra, and all their goods are deposited at the Custom House, some of their cargoes are valued at a million of dollars, the duties on which amounted to nearly 100,000.

The Chinese, at Manila, retain all the customs of their country, excepting those respecting religion, and a few other things of small moment. They make use of the Chinese characters in writing, beginning at the right hand of the paper and writing downwards. Their manner of marking down any number, is somewhat similar to the common method used by Americans, ^{in marking boards.} thus the mark for 2 is II, 22 is II=, the mark for 3 is III, 33 is III=.

The cross + placed at the bottom, signifies that the number above it stands in the place of tens, thus + stands for 5, with the cross at the bottom + it stands for 50. There are two sets of characters from 1 to 10, which are alternately used, as it would be an inconvenience to mark 12 with the same characters II II. The character for 100 is

thus X signifies 400. X II = stands for 423. The

character for 1000 is =, 10000 is + =, 100000 is = + =
Examples.

| | | | | |
|----------|-----------|----------------|-------------------|--------------------------|
| American | 32 | 365 | 2147 | 34678 |
| Chinese | II = + | III + 5 5 + | II - X + + 5 + | III X + + + = + + 5 + |

| American | Chinese |
|----------|---------------|
| 1 | I |
| 2 | II |
| 3 | III |
| 4 | X |
| 5 | + |
| 6 | I + |
| 7 | II + |
| 8 | III + |
| 9 | X + |
| 10 | = |
| 11 | + + |
| 12 | I + + |
| 13 | II + + |
| 14 | III + + |
| 15 | X + + |
| 16 | I + + + |
| 17 | II + + + |
| 18 | III + + + |
| 19 | X + + + |
| 20 | = + |
| 21 | + + + |
| 22 | I + + + + |
| 23 | II + + + + |
| 24 | III + + + + |
| 25 | X + + + + |
| 26 | I + + + + + |
| 27 | II + + + + + |
| 28 | III + + + + + |
| 29 | X + + + + + |
| 30 | = + + |

Numbers from 1 to 30.

at Manila, and the Isle of France,

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Magnetic Observations taken on board the Ship *Henry*,
in her voyage to the Isle of France in 1795.

Outward Passage

| Time | Lat. | Long. | Variation. | | Time | Lat. | Long. | Variation. | |
|-----------------------|-------|-------|------------|----------|----------|-------|-------|------------|--------|
| | | | Morning | Evening | | | | Morn | Even. |
| 1795 | North | West | West | West | 1795 | South | West | West | West |
| Jan ^r . 25 | 33.33 | 45.45 | | 9.0 | March 10 | 19.47 | 25.51 | — | 2.50 |
| 27 | 28.59 | 35.48 | | 13.02 | | 20.35 | 25.48 | 3.8 | 3.6A |
| | | | | A 10.46+ | 11 | 21.3 | 25.37 | — | 2.51 |
| 31 | 29.10 | 28.47 | | 15.00A | 12 | 21.32 | 25.52 | 2.25 | |
| Feb. 6 | 27.0 | 23.38 | | 15.44 | | 23.13 | 24.11 | — | 3.51 |
| | 26.14 | 22.54 | 15.46 | | | 23.43 | 23.40 | 2.31 | A 3.26 |
| 8 | 24.42 | 21.57 | — | 17.56 | 15 | 25.26 | 23.3 | 3.58 | |
| | | | — | 16.06A | 16 | 26.46 | 21.53 | 3.46 | |
| | | | | | 18 | 28.11 | 18.40 | 5.28 | |
| | 24.07 | 21.47 | 15.14 | | 20 | 29.27 | 14.38 | — | 7.43 |
| 10 | 21.24 | 21.38 | 12.58 | | | 30.3 | 13.29 | 7.12 | |
| 11 | 20.7 | 21.38 | — | 11.41 | 25 | 34.40 | 7.23 | 10.7 | |
| 12 | 17.21 | 21.29 | — | 13.22 | 26 | 35.5 | 5.55 | — | 14.10 |
| | 16.15 | 21.29 | 11.41 | | | 35.28 | 4.26 | 12.13 | |
| 13 | 15.28 | 20.43 | — | 12.02A | | East | | | |
| | | | — | 12.09 | 30 | 36.38 | 6.20 | — | 13.40 |
| 14 | 13.25 | 20.30 | — | 11.54 | April 1 | 35.51 | 2.36 | 14.9 | |
| | 12.14 | 20.0 | 11.39 | | 2 | 35.50 | 2.52 | — | 14.38 |
| 16 | 9.47 | 20.10 | — | 11.48 | 3 | 36.12 | 4.21 | — | 15.19 |
| | | | — | 11.45A | | 36.24 | 4.52 | 16.5 | |
| | 8.57 | 20.10 | 10.50 | | 4 | 37.20 | 7.30 | 16.57 | |
| 17 | 6.39 | 20.43 | 10.49 | | 5 | 37.57 | 8.46 | — | 17.33+ |
| 18 | 5.46 | 20.49 | 11.00 | | | 38.19 | 9.13 | 10.22 | |
| 20 | 3.16 | 21.22 | 10.47 | 10.47 | | | | 18.44 | |
| 23 | 0.22 | 24.2 | 8.29 | | 7 | 38.4 | 13.5 | 20.26 | |
| 24 | 0.4 | 24.13 | — | 8.46 | 9 | 37.4 | 18.54 | — | 23.43 |
| South | | | | | | 36.45 | 19.32 | 24.33 | |
| 0.31 | 24.33 | 8.20 | | | 10 | 36.46 | 21.37 | — | 24.48 |
| | | | | | | 36.47 | 22.48 | 25.3 | |
| | | | | | 11 | 36.47 | 23.56 | — | 25.9 |
| | | | | | 12 | 36.54 | 27.02 | — | 26.26 |
| 25 | 1.04 | 25.0 | — | 8.27A | | | | | |
| 26 | 2.32 | 24.49 | — | 7.05 | 13 | 36.74 | 28.54 | — | 28.3 |
| | 3.26 | 25.17 | 6.26 | | | 36.52 | 29.34 | 26.30 | |
| 28 | 5.48 | 26.49 | — | 5.24 | 14 | 36.58 | 30.68 | — | 28.13 |
| March 1 | 7.30 | 27.48 | 4.55 | | 15 | 36.33 | 34.51 | 19.5 | |
| 2 | 7.59 | 27.49 | — | 4.14 | 17 | 36.1 | 38.58 | — | 27.48 |
| | | | — | 4.25A | 18 | 35.54 | 40.6 | — | 28.47 |
| | 8.37 | — | 3.22 | | 19 | 36.45 | 42.55 | 28.4 | |
| 3 | 9.27 | 27.50 | 3.33 | | 22 | 35.44 | 47.28 | 27.6 | |
| 4 | 10.19 | 27.47 | 3.46 | | 23 | 36.10 | 47.50 | 28.12 | |
| 6 | 13.13 | 26.53 | 3.54 | | 25 | 36.31 | 51.21 | 27.57 | |
| 8 | 17.06 | 26.0 | 3.14 | | | | | | |

Nathl. Bowditch's Journal,

Magnetical Observations in 1795.

| Time. | Lat. | Long. | variations Morn Eve. | Time | Lat. | Long. | variations Morn Eve. |
|-------------------|-------|-------|-------------------------|---|----------|----------|-------------------------|
| 1795 | South | East | West. | 1795 | South | West | West. |
| April 27 | 35.79 | 54.0 | 26.3 | Nov. 17 | 7.10 | 21.40 | 10.12 |
| 28 | 34.46 | 55.32 | 25.0 | 18 | 7.0 | 22.50 | 8.4 |
| May 3 | 31.33 | 57.25 | 21.52 | 19 | 6.53 | 23.38 | 8.21 |
| | 30.51 | 57.36 | 20.43 | | 6.39 | 24.22 | 7.50 |
| 5 | 26.07 | 58.25 | 17.9 | 21 | 6.19 | 25.14 | 6.09 |
| 7 | 22.16 | 58.31 | 13.36† | | 4.49 | 28.22 | 6.53 |
| 8 | 20.42 | 56.55 | 16.26† | 22 | 4.12 | 29.02 | 4.46 |
| Homeward Passage. | | | | 23 | 2.29 | 30.12 | 4.42 |
| 1795 | | | | | 1.43 | 31.02 | 5.16 |
| Sept. 30 | 21.54 | 53.46 | 13.59 | | 0.54 | 31.44 | 3.11 |
| October 2 | 23.34 | 51.32 | 16.20 | North | | | |
| | 24.23 | 50.45 | 16.59 | 21 | 0.08 | 32.36 | 2.18 |
| 3 | 26.12 | 48.40 | 18.40 | 25 | 0.32 | 32.56 | 3.13 |
| 4 | 26.41 | 47.50 | 21.12 | 27 | 3.08 | 34.41 | 3.56 |
| | 27.14 | 47.16 | 20.16 | 29 | 4.01 | 35.18 | 2.49 |
| 5 | 27.37 | 46.56 | 21.26 | | 7.25 | 37.39 | 1.14 |
| | 28.22 | 46.07 | 24.38† | 30 | 8.05 | 38.14 | 3.33 |
| 6 | 28.31 | 45.19 | 24.0 | | 8.53 | 38.49 | 0.06 |
| | | | 23.47 | December 1 | 10.02 | 39.46 | 0.53 |
| 7 | 28.45 | 44.37 | 25.13 | 2 | 10.46 | 40.15 | 3.12 |
| 8 | 29.38 | 42.38 | 24.24 | 3 | 13.07 | 42.15 | 3.23 |
| 9 | 29.43 | 40.13 | 23.57 | 5 | 15.29 | 44.18 | 1.08 |
| 10 | 30.3 | 38.36 | 24.28 | | 16.27 | 45.16 | 0.55 |
| 12 | 30.59 | 35.05 | 26.26 | 7 | 18.47 | 48.10 | 1.44 |
| 11 | 30.42 | 32.17 | 25.42 | 9 | 21.33 | 51.24 | 2.47 |
| 18 | 33.32 | 28.19 | 25.58 | 11 | 23.54 | 54.09 | 3.13 |
| 19 | 34.03 | 27.18 | 25.50 | | 24.26 | 57.51 | 1.20 |
| 21 | 35.22 | 22.07 | 25.21 | 15 | 27.56 | 58.47 | 2.25 |
| 27 | 28.48 | 9.13 | 26.50 | | 28.45 | 59.43 | 1.30 |
| 28 | 28.38 | 9.07 | 20.18 | 16 | 29.30 | 60.11 | 3.56 |
| | 28.29 | 8.31 | 18.6 | 23 | 33.29 | 60.15 | 5.49 |
| 29 | 28.0 | 8.31 | 19.40 | 27 | 34.0 | 59.57 | 7.17 |
| 31 | 25.34 | 7.19 | 19.54 | 1796 Jan. 1 | 34.2 | 60.5 | 5.55 |
| Nov. 5 | 24.09 | 6.50 | 19.14 | | 38.51 | 62.77 | 7.07 |
| | 23.19 | 6.23 | 19.57 | Observations made in the Island of Bowditch, At St Denis on board the ship. | | | |
| 2 | 22.23 | 5.21 | 19.21 | 1795 | | | |
| 3 | 20.44 | 4.10 | 18.11 | May 15 | 20.51 S. | 55.36 E. | 16.4 |
| 4 | 20.20 | 3.30 | 18.21 | May 22 | 0° | 0° | 15.5 |
| 6 | 18.18 | 0.15 | 18.40 | June 17 | 0° | 0° | 15.33 |
| 7 | 17.38 | 0.37 | 15.26 | Mean of the three observ. | | | 15.33 |
| 9 | 14.45 | 5.42 | 14.16 | 1798 | | | |
| 12 | 10.13 | 11.52 | 13.43 | July 31 | 20.58 | 0° | 15.33 |
| 13 | 9.19 | 13.42 | 12.35 | Aug. 7 | 0° | 0° | 15.28 |
| 15 | 7.49 | 17.17 | 12.9 | | | | |
| 16 | 7.23 | 19.36 | 10.19 | At St Paul's. | | | 15.15 |
| | | | | | | | 12.52 |
| | | | | | | | 14.4 |

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All the observations given in the two preceding pages were made by observing the sun's azimuth, except those marked A. which were by an amplitude, and those marked D which were by the moon. The longitude is given as determined by many lunar observations, proportioning the difference between a preceding & following observation; and probably the longitude is never more than a degree from the truth. When the vessel rolled considerably, the mean of 12 or 15 observations were taken; and never less than six. I esteem the observations given in these pages as more accurate than those in the preceding journal to Manila.

Soundings on Brown's Banks -

We had soundings on Brown's Banks in 1796, and at the same time took several lunar observations; the observations were these,

1796 Jan 5. Lat $42^{\circ} 41'$ N. Long. 65.0 W. 115 fath. green shells.
6 Lat 42.46 N. Long. 65.23 W. 60 fath.

The latitude was obtained by a meridian altitude of the moon, I mention these soundings because the English Chart we had on board did not lay the banks so far to the southward, although the American Charts did.

While at Barbours I observed the Latitude of St Denis, St Paul's and St Benoit.

| | |
|---|---------------------------------|
| St Denis (Government House). Latitude by Obs. of June 28. 1795. | $20.51.45$ S. |
| do. July 16. 1795. | $20.51.33$ |
| Mean | <u>$20.51.39$ S.</u> |

| | | |
|---|--------------------------------|------------------------------|
| St Paul's (In the Bay, $\frac{3}{4}$ mile from shore) | Obs ^d July 31. 1795 | $20.58.33$ S. |
| | Aug. 1. 1795 | $20.57.28$ |
| | 2. 1795 | $20.57.13$ |
| | Mean | <u>$20.58.25$</u> |

| | | |
|--------------------------------------|-----------------------|-----------------------------|
| St Benoit. (one mile from the shore) | Observed Sep 11. 1795 | $21.0.19$ |
| | 12. 1795 | $21.0.37$ |
| | 13. 1795 | $21.0.24$ |
| | Mean, | <u>$21.0.27$</u> |

I took another observation at St Benoit Sep 12. but it made the latitude smaller than the others & I concluded that it was the ill-adjustment of the instrument.

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Longitude of St. Paul's in the Isle of Bourbon, on board the ship, in the road, by an eclipse of the Moon, comparing the beginning & end with the times in the Nautical Almanac.

Beginning 55.14.15 E. London
End 55.12.45

By a lunar observation July 31 55.36

Longitude of St. Benoit by a lunar obs. of C.A. Sep. 19. 1795 55.49 E.

Longitude of St. Denis by ditto May 15. 1795 55.57 E.

Latitudes of several places from 1795 to 1800.

Cape Ann light houses 42.40 N. At the time of making this observation we were not exactly in the parallel of the lights, there may therefore be an error of 1 or 2 miles.

Peak on Prince's Island starts of Sunda.

| | | | |
|-----|--------------|-------|---|
| 30° | Croato | ditto | 6.8 S. Marked erroneously 8.6 in Cook's Voyages |
| 3° | Jamarand | d° | 5.54 S. Two observations |
| 3° | Cap | 3° | 5.58 S. Two observations |
| 20° | Buttan | 3° | 5.52 S. |
| 20° | Two Brothers | | 5.8 S. |

Luapera

3.11 S.

Pulo Candore

8.40 N.

Monsieur Island (Java Sea)

4.24 S.

Three islets near the S. E. of J. P. Laet.

Two northernmost 4.3 S.

Southernmost 4.7 S.

Great Pulo Laet

N. P.

3.8 S.

Three alike Islands (Straits of Macassar)

3.36 S.

Basidan

(Middle)

6.25 N.

Straits between Basidan & Mindanao

6.40 N.

Cagayan Islands Northernmost

9.40 N.

Negros (South Point)

9.8 N.

Quinichuan Island, lying between

the north parts of Panay and Palawan,

the northernmost of the group

11.25 N.

Cuyo Island to the South of the above

11.00

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Dangerous Shoal on which the sea was seen to break, marked 8 fath. bank on some charts, at 7 or 8 leagues distance from the N.W. part of Panay, its latitude being nearly 11.20 N. It was seen at 6 P.M. & we had a good observation the preceding noon, which, carried on by the log, would make it in that latitude.

Islands lying near the south part of Mindoro:

| | | |
|-----------------------------------|--------------|----------|
| | Western most | 12.11 N. |
| | Eastern most | 12.12 N. |
| | | 12.29 N. |
| Mindoro (Mount Ylilim) | | 12.39 N. |
| Apo Banks, large rock above water | | 12.42 N. |
| do Smaller delta | | 12.28 N. |
| Entrance of Manila Bay | | 13.55 N. |
| Goat Islands | | |

I observed the latitude of Alicant, in Spain, on board the ship at the common anchoring ground; the result of 4 or 5 observations, with different instruments made it 38.18 N. W James Stuart, who was mate of the ship, also made it in the same latitude. In most books it is marked 38.38 N. And in none (I have seen) less than 38.25 N.

